

Appendix A. Marina Market Study

WASHINGTON, D.C. MARINA MARKET STUDY

Final

Prepared for:

Forest City Washington

1615 L Street, NW, Suite 400
Washington, D.C.



Prepared by:



*M&N File: 6749-00
January 2009*

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TABLE OF CONTENTS

1.	EXECUTIVE SUMMARY	4
2.	EXISTING REGIONAL MARINA MARKET.....	6
2.1	Market Area	6
2.2	Boating Activities	8
2.3	Existing Marinas	9
2.4	Live-Aboards	12
2.5	Amenities	12
2.6	Pricing	14
3.	BOATING TRENDS	16
3.1	National Boating Trends	16
3.2	Economic Driver Correlation to Boat Ownership	17
3.3	Regional/State Boating Trends	20
3.4	Local Boating Trends.....	21
4.	MARKET CAPACITY – PROJECTED MARKET.....	24
4.1	Market Drivers	24
4.2	Existing Market Lease Rate Analysis	33
4.3	Slip Occupancy	34
4.4	Projected Slip Absorption	34
5.	MARINA DESIGN CONSIDERATIONS	35
5.1	Site Conditions.....	35
5.2	Dock Structures.....	35
5.3	Amenities	37
5.4	Ancillary Amenities:.....	42
5.5	Premium Amenities	44
6.	MARINA CASH FLOW ANALYSIS.....	46
6.1	Cost analysis	46
6.2	Revenue analysis.....	47
6.3	Cost and Revenue Analysis	50
7.	MARINA PROGRAM.....	52
7.1	Slip Number	52
7.2	Slip Mix	52
7.3	Slip Lease Rates.....	53
7.4	Strengths, Weaknesses, Opportunities and Threats	55
8.	REFERENCES	56
	APPENDIX A: MARINA SURVEY DATA	57

TABLE OF FIGURES

Figure 2-1:	D.C. Marina Market Region	6
Figure 2-2:	Attractions	9
Figure 2-3:	Existing Marinas	10
Figure 3-1:	Total Recreational Boats Registered in the U.S. (1989-2007)	17
Figure 3-2:	Population Growth and U.S. Registered Boat Growth	18
Figure 3-3:	Real GDP Growth and U.S. Registered Boat % Growth	19
Figure 3-4:	Oil Price Fluctuations and U.S. Registered Boat Growth	20
Figure 3-5:	Registered Vessels in the Regional Market	21
Figure 3-6:	Registered Vessels in the D.C. Market	22
Figure 3-7:	Northern Virginia Registered Vessels by Size	22
Figure 3-8:	Virginia, Maryland and D.C. Boater Activity Participation	23
Figure 4-1:	D.C. Market Population Growth Trends	28
Figure 4-2:	D.C. Market Age Demographic Trends	30
Figure 4-3:	D.C. Market Crime Trends	32
Figure 5-1:	Boat Dimension by LOA	37
Figure 7-1:	Concept Marina Layout	53

LIST OF TABLES

Table 2-1:	D.C. Market Marina Slip Allotment by Size	11
Table 2-2:	Available Amenities.....	13
Table 2-3:	D.C. Market Marina Slip Lease Rates	14
Table 4-1:	D.C. Market Income Demographic Trends.....	28
Table 5-1:	Dock Type Prevalence in the D.C. Market.....	36
Table 5-2:	Vessel Electrical Requirements	38
Table 6-1:	Marina Staffing Estimate	47
Table 6-2:	Slip Lease Revenue.....	48
Table 6-3:	Fuel Revenue	48
Table 6-4:	Utility Revenue	49
Table 6-5:	Ship's Store Revenue.....	49
Table 6-6:	Miscellaneous	50
Table 7-1:	Projected Market Slip Demand.....	52
Table 7-2:	Proposed Slip Mix.....	53

1. EXECUTIVE SUMMARY

The Yards is a proposed mixed-use development by Forest City along the waterfront of the Anacostia River in southeast Washington, D.C adjacent to the Washington Navy Yard. Forest City retained Moffatt & Nichol (M&N) to prepare an assessment of the Washington, D.C. (D.C.) regional boating market as it relates to the proposed marina and upland development project. The proposed project includes a wet slip marina in an active waterfront atmosphere. The objective of this study is to evaluate trends in the regional and local boating markets with regards to slip demand, vessel class and size, support facilities and amenities, and economic impact and revenue generation to assist Forest City with programming of the marina elements.

The existing D.C. marina market consists of many public marinas, private marinas, yacht clubs, and individual docks. For this assessment, 26 marinas were identified in the market. Overall market trends include the following:

- Slips in the D.C. market are generally in public marinas (leased slips)
- Estimated average annual wet slip occupancy of 75-95% (100% during boating season)
- Daily wet slip lease rates from \$1.00 /ft to \$3.00/ft
- Monthly wet slip lease rates from \$5.50/ft to \$15/ft

The following market drivers are expected to attract boaters to the facility:

- Scarce availability of marina slips in the local region due to high annual occupancy rates
- Proposed upland residential and commercial development
- Continuing strong demand for boating activities due to favorable demographic trends
- Local attractions and a diverse set of venues

Live-aboard boats are popular in marinas close to D.C. and serve as housing in lieu of apartments for some workers. In contrast, marinas in the surrounding suburbs cater more to day-sailors that use their boat to cruise, fish, or sail locally. The District location 100 miles upriver on the

Potomac from the Chesapeake Bay limits transient boat traffic. To increase demand, the proposed project may be positioned as a destination-type marina that includes personalized slip-side services and an active waterfront atmosphere similar to Annapolis or Baltimore.

Analysis of the existing and projected D.C. boating market indicates the following:

- Support for 325-450 wet slips with immediate absorption of 30-50 slips, followed by 20-30 slips in each subsequent year.
- Occupancy rates in line with the existing market of 75% to 95%.
- Wet slip lease rates on the order of \$2.00-\$3.00 per foot per day and \$10-\$15 per foot per month increasing annually at 5%.

Marina slip layout concepts developed based on the existing shoreline configuration and Federal Channel location results in layouts with 40 to 50 wet slips. The following costs and revenues are based on these concepts.

- Dock construction costs range from \$1.4 million to \$1.8 million (does not include bulkhead repairs or upland construction)
- Cash flow is projected to be positive ranging from \$50,000 to \$60,000 per year at full occupancy (does not include debt service)

The following report sections outline the existing marina market including number and size of slips, the projected marina market, marina design considerations, and a detailed breakdown of the cost and revenue cash flow analysis.

2. EXISTING REGIONAL MARINA MARKET

Cataloging the existing regional marina market provides insight into market capacity and local boating trends. The existing D.C. marina market consists of 26 marinas along with numerous private slips and yacht clubs. The following sections outline the D.C. marina market area, boating activities and marina trends to evaluate the current marina wet slip supply and project future demand in the market region.

2.1 Market Area

Marinas on the Potomac and Anacostia Rivers and their tributaries are supported by boaters from the D.C. region. The D.C. market area may be defined both geographically and demographically. Market areas are defined geographically by the expected distance that boaters are willing to travel to use the marina facilities and include the competing marinas within that area. Marina market areas based on owner demographics are often distinguished by the type of associated upland development and the targeted vessel size classes.

Geographically, studies and boater interviews suggest boaters are willing to travel up to one hour from home to reach their boat. Using this guideline, the marina market region for D.C. may be defined as the District and surrounding areas including



Figure 2-1: D.C. Marina Market Region

Montgomery and Prince George's County in Maryland and Fairfax and Arlington County and Alexandria City in Virginia (see Figure 2-1). Further north of this area the narrowing of the Potomac River, low clearance bridges, and the presence of the Brookmont Dam limits the marina market. The D.C. geographic market area overlaps with adjacent marina markets including the Annapolis market and coastal Chesapeake Bay. Boaters outside of a one hour radius are not expected to seek berthing within the D.C. market; however, many boaters within this radius may berth in adjacent market areas.

The Washington D.C. market area can be further geographically separated into two sub-markets; 1) downtown marinas and 2) suburban marinas in Maryland and Virginia. Boat usage in these two sub-regions differs. In the downtown region, several of the marinas are operated by social clubs and many boats are used as "live-aboards." Marinas further from the District are generally public facilities catering to day-users with no live-aboards permitted.

2.1.1 Downtown

Live-aboards are prevalent in the downtown marinas due to their proximity to District employers. Interviews with marina dockmasters indicates that workers with permanent residences outside of the District working within the District keep boats at downtown marinas for use after work while waiting for the traffic to abate or to spend the night. While many marinas do not allow, or limit, permanent live-aboards, spending a few nights onboard (up to 4 nights a week at the Gangplank Marina) is not considered live-aboard. District workers may spend Monday through Thursday nights on their boat and then return to their permanent residences for the weekend rather than maintaining an in-town apartment. These downtown locations also allow for corporations and lobbyists to entertain clients on the vessel, either while docked at the slip or cruising on the Potomac River. Several dock masters indicated that many vessels remain at the dock the majority of the time for these purposes and may only cruise a few hours a year if at all.

2.1.2 Suburban

The marinas in Maryland and Virginia typically lease slips to local resident boaters participating in water based boating activities including cruising, sailing, and fishing. As with the downtown marinas the predominant slip takers have long-term leases. The D.C. suburban marina market

includes a higher percentage of smaller vessels, less than 40 feet. In addition, many vessels less than 40 feet will be put in dry storage during the winter months from November to April resulting in more seasonal wet slip leases.

2.2 Boating Activities

Peak boating season in the D.C. market coincides with the warmer weather months, generally from April to October. Cold weather is not conducive to the popular recreational boating activities in the market and there are fewer vessels in use during the winter. Many smaller boats (less than 40 feet) are moved from wet slips to dry storage during the winter to reduce docking costs. An additional impediment to boating during these colder months is the ice that can form in the waterways. Ice can damage watercraft and dock structures and many smaller boats throughout the market are stored on the upland during this period to avoid damage.

Although ice is a concern in the Potomac River, marinas may combat this problem at the docks with the use of bubblers or deicers placed throughout the marina basin to prevent ice from damaging structures. In marinas that do not offer this amenity, some boat owners have purchased bubbler systems for their slips.

During the spring, summer, and fall, boaters visit historic sites such as Mt. Vernon or the monuments along the National Mall in addition to cruising to popular locations for dining and nightlife. A popular weekend activity is to cruise to Georgetown or Alexandria and tie up to go experience the restaurants and nightlife in these areas. Fishing is also a common activity in the Potomac River in the vicinity of the District



Washington, D.C. attracts transient boaters seeking to enjoy the sites and activities of the nation's capital in addition to nationally renowned bass fishing tournaments. Transient boaters often cruise to a specific destination, stopping at convenient locations along the way. The District is nearly 100 miles up the Potomac River from

the Chesapeake Bay and the main cruising routes. This distance may discourage many transient boaters from visiting the District unless it is the specifically sought destination. Vessels traveling to D.C. may stay for a few days or the entire season and typically originate from the mid-Atlantic region or Florida, although vessels from as far as Australia have been reported. Transient boating is not a significant portion of the existing market and the majority of the marinas do not specifically reserve slips for this purpose but allow it if space is available.



Figure 2-2: Attractions

2.3 Existing Marinas

For this study, 26 marinas were identified in the D.C. market comprising approximately 3,800 slips. The location of each marina is shown in Figure 2-3 and number and size of slips in each marina is shown in Table 2-1.

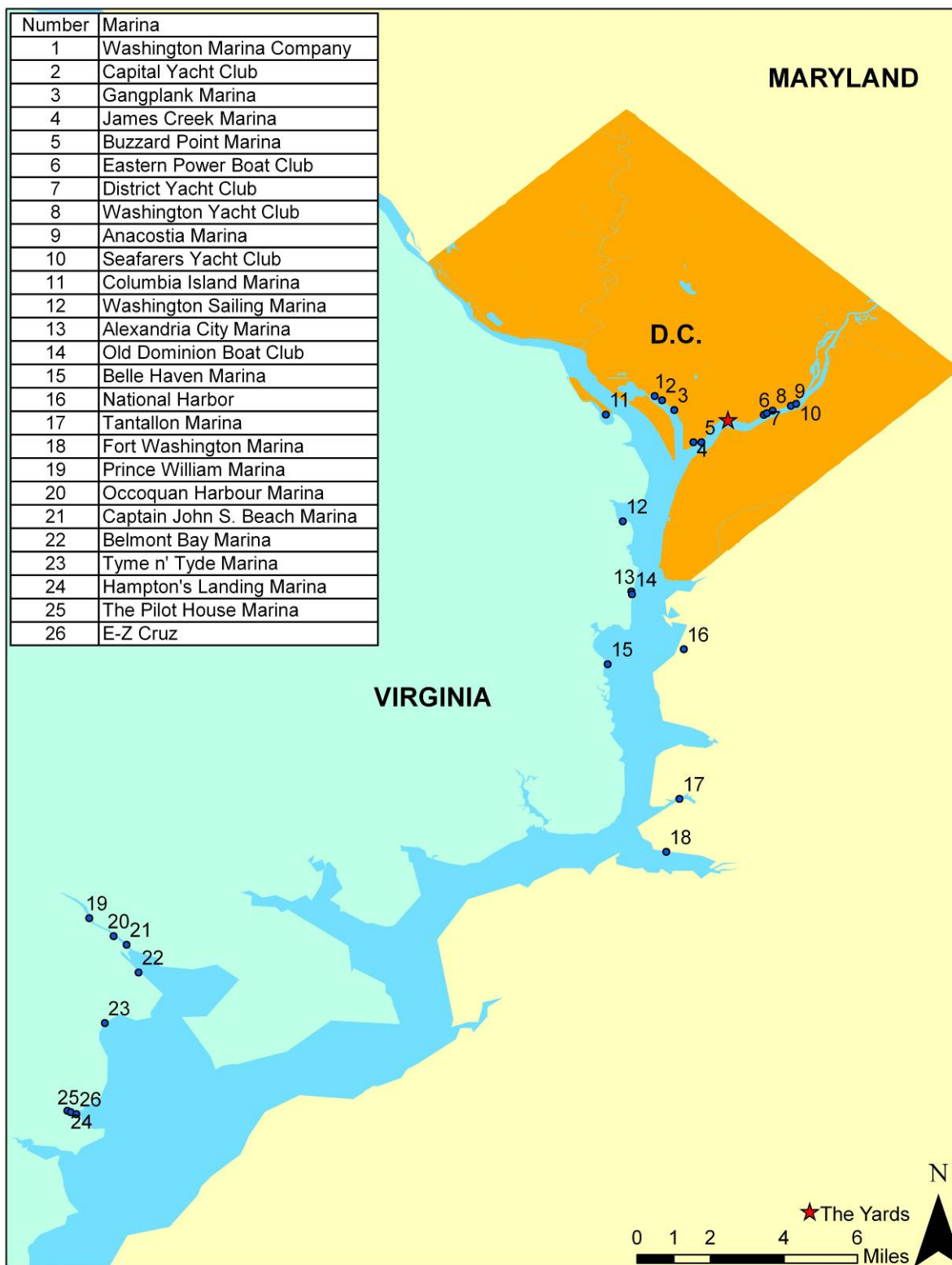


Figure 2-3: Existing Marinas

Table 2-1: D.C. Market Marina Slip Allotment by Size

		Total Slips	Percentage of Slips by Length (feet)						
			20-29	30-39	40-49	50-59	60-69	70-79	80+
1	Washington Marina Co	111	77%		13%	1%	4%	3%	3%
2	Capital Yacht Club	78			44%	28%	24%		4%
3	Gangplank Marina	303	17%	24%	40%	8%	8%		4%
4	James Creek Marina	294	51%	35%	14%				
5	Buzzard Point Boat Yard	85	64%	28%	5%	4%			
6	Eastern Power Boat Club	29		21%	66%	10%	3%		
7	District Yacht Club	43		30%	65%	2%			2%
8	Washington Yacht Club	40	35%	30%	35%				
9	Anacostia Marina	75	4%	67%	21%		8%		
10	Seafarer's Yacht Club	66	15%	68%	14%		3%		
11	Columbia Island Marina	380	58%	32%	4%	6%			
12	Washington Sailing Marina	200	70%	30%					
13	Alexandria City Marina	60	72%	23%	2%		2%		2%
14	Old Dominion Boat Club	52	63%	29%	8%				
15	Belle Haven Marina	128	14%	41%	41%	5%			
16	National Harbor Marina	66			48%		48%		3%
17	Tantallon Marina	106	52%	12%	25%	11%			
18	Fort Washington Marina	300	67%	20%	13%				
19	Prince William Marina	351	32%	54%	5%	9%			
20	Occoquan Harbor Marina	199	63%	24%	9%	3%	2%		
21	Captain John S. Beach Marina	84	79%	21%					
22	Belmont Bay Harbor Marina	151	21%	64%	16%				
23	Tyme n Tyde Marina	29	52%	41%	7%				
24	Hampton's Landing Marina	123	29%	41%	29%				
25	Pilothouse Marina	219	60%	28%	12%				
26	E-Z Cruz Marina	187	58%	36%	6%				
	Total	3,759	45%	32%	16%	4%	3%	0.1%	1%

The marinas in Table 2-1 range from residential community marinas to members-only yacht clubs. There are more than 2,500 slips less than 40 feet in length in the existing market and only 1 percent of slips capable of accommodating vessels 80 feet and longer.

The majority of the vessels occupying slips in the D.C. market are power boats and small sailboats. The Potomac River is generally too narrow for larger, deep-drafted sailboats. While weather in this area is favorable for sailing, which is a popular activity in the nearby Chesapeake Bay, river width restrictions limit the size vessel that can comfortably sail these waters. Height restrictions due to bridges are also deterrents for sailboats. The 75-foot clearance afforded by the newly reconstructed Woodrow Wilson Bridge can accommodate a sailboat up to approximately 46 feet (Tobiasson, 2000). Larger vessels may still be accommodated through the Woodrow Wilson Bridge drawbridge opening, although the hours are restricted to off-peak times.

2.4 Live-Aboards

Environmental impacts and overall marina appearance are often a concern for marinas in determining whether to allow live-aboards at their facilities as these vessels place higher demands on utilities and may generate more dock clutter and trash with a permanent occupant onboard. Of particular concern is the disposal of sewage. Improper sewage disposal may pollute the marina and adjacent waterbodies.

Although not always the case, if a live-aboard owner is not using their vessel for boating purposes, the vessel may not be properly maintained and fall into a state of disrepair. Marinas in the D.C. market have been reported to require boat owners to prove the seaworthiness of a live-aboard vessel at least once a year and the federal and local governments in this market have restrictions that do not allow live-aboards at publicly owned facilities. The operational concerns combined with regulatory restrictions result in only three marinas in the D.C. market currently allowing live-aboards.

2.5 Amenities

Typical marina amenities include shore power, potable water, sewage pump-out, and communications facilities on the docks. Amenities may also include landside facilities including parking, restrooms, showers, and laundry services. Year-round, seasonal, live-aboard and

transient boaters require different amenities and the amenities that marinas provide influences the type of boater that frequents the facility.

D.C. boat owners indicate convenient parking is important for loading and unloading. Marinas located outside of D.C. have ample room for parking at their facilities; however, dock masters in downtown D.C. indicated that insufficient parking is problematic for their marinas. Generally marinas have sufficient parking if there is one space available for every two boat slips.

Potable water and electric are the two most provided and required amenities in the D.C. market, as Table 2-2 indicates. As many of the marinas in the market area are older and have a predominance of smaller slips, power is generally available at 30 amps with some marinas offering 50 amps and two marinas offering 100 amps. The 50 and 100 amp services are offered only at a few slips. National Harbor, opened in spring 2008, caters specifically to larger vessels with large slips and 100 amp power. Dockmasters in the market reported increased power as the most necessary amenity upgrade at existing facilities. This demand is due to increased standard amenities offered on vessels, such as air conditioning, television and audio systems.

In addition to water and power, sanitary pump-outs are available at a majority of the facilities, as shown in Table 2-2. Sanitary pump-outs are becoming a more prevalent amenity at marinas as the use of pump-outs creates a cleaner marina environment by decreasing the number of vessels that illegally empty waste into the marina basin. Newly constructed or renovated marinas are often required to have pump-out available in order to obtain a permit to decrease the negative impact of the marina on the environment. However, pump-outs are not required in D.C. marinas.

Table 2-2: Available Amenities

Amenity	Number of Marinas
Potable Water	26
Electric	25
Sanitary Pump-out	23
Gas	12
Ice Machine	12
Shower	12
Restaurant	9
Diesel	7
Satellite TV/Cable	6
Bar	5
Laundry Facilities	5
Telephone	4
Internet	4
Shopping	2
Swimming Pool	2
Hotel	1
Water Sports	1

The amenities offered at most marinas are consistent with minimal transient vessels that may require additional amenities (e.g. showers, laundry, etc). Marinas catering to boaters that have nearby residences do not need to offer amenities available to boaters at their permanent residence including laundry, satellite TV/cable, telephone and internet. Similarly, marinas do not typically include attached hotels, restaurants, or bars. These amenities are well-established in the city and the suburban marinas cater to the local residential population and generally do not require these services.

2.6 Pricing

Slip lease rates in the D.C. market vary and are influenced by marina location, season and slip size. Table 2-3 shows published rates for D.C. market marina.

Table 2-3: D.C. Market Marina Slip Lease Rates

Marina	Rate per Foot			
	Daily	Weekly	Monthly	Yearly
Downtown Marinas				
Buzzard Point Marina	\$1.00		\$7.25	
Capital Yacht Club	\$1.50 - \$3.00			
District Yacht Club				
Eastern Power Boat Club				
Gangplank Marina	\$1.50	\$8.00	\$13.60 - \$17.00	\$11.00 - \$15.00
James Creek Marina	\$1.25		\$9.00 - \$10.25	\$8.00
Seafarers Yacht Club				
Washington Marina Company	\$2.50		\$9.00	\$9.67 - \$9.83
Suburban Marinas				
Alexandria City Marina	\$1.00 - \$3.00		\$7.35 - \$8.25	
Anacostia Marina				
Belle Haven Marina			\$8.25	
Belmont Bay Marina	\$1.50	\$8.00	\$16.00	\$11.25
Captain John S. Beach Marina				

Table 2-3: D.C. Market Marina Slip Lease Rates

Columbia Island Marina	\$1.50			\$9.50 - \$11.48
E-Z Cruz			\$6.10 - \$8.33	\$5.49 - \$7.50
Fort Washington Marina	\$1.50		\$6.80 - \$10.79	\$8.25 - \$8.58
Hampton's Landing Marina	\$1.00			\$8.33 - \$12.50
National Harbor	\$2.25			\$10.42
Occoquan Harbour Marina	\$1.50			\$10.00 - \$14.17
Old Dominion Boat Club	\$0.25 - \$1.00			
Prince William Marina				
Tantallon Marina				
The Pilot House Marina				\$6.25 - \$12.34
Tyme n' Tyde Marina				
Washington Sailing Marina			\$8.50 - \$8.98	\$7.40 - \$7.88
Washington Yacht Club				

The existing wet slip lease range for a transient vessel is \$1-\$3 per foot per day. Marinas located near downtown D.C. and Alexandria as well as larger slips command the higher end of the spectrum while those on the lower end are further from the city center and have older, smaller docks. These trends carry into the monthly and yearly lease slip rates. Monthly and yearly wet slip rates have wider prices ranges for the various facilities. Monthly ranges are on the order of \$6-\$17 per foot per month and the yearly ranges are slightly discounted from \$5.50-\$15 per foot per month.

3. BOATING TRENDS

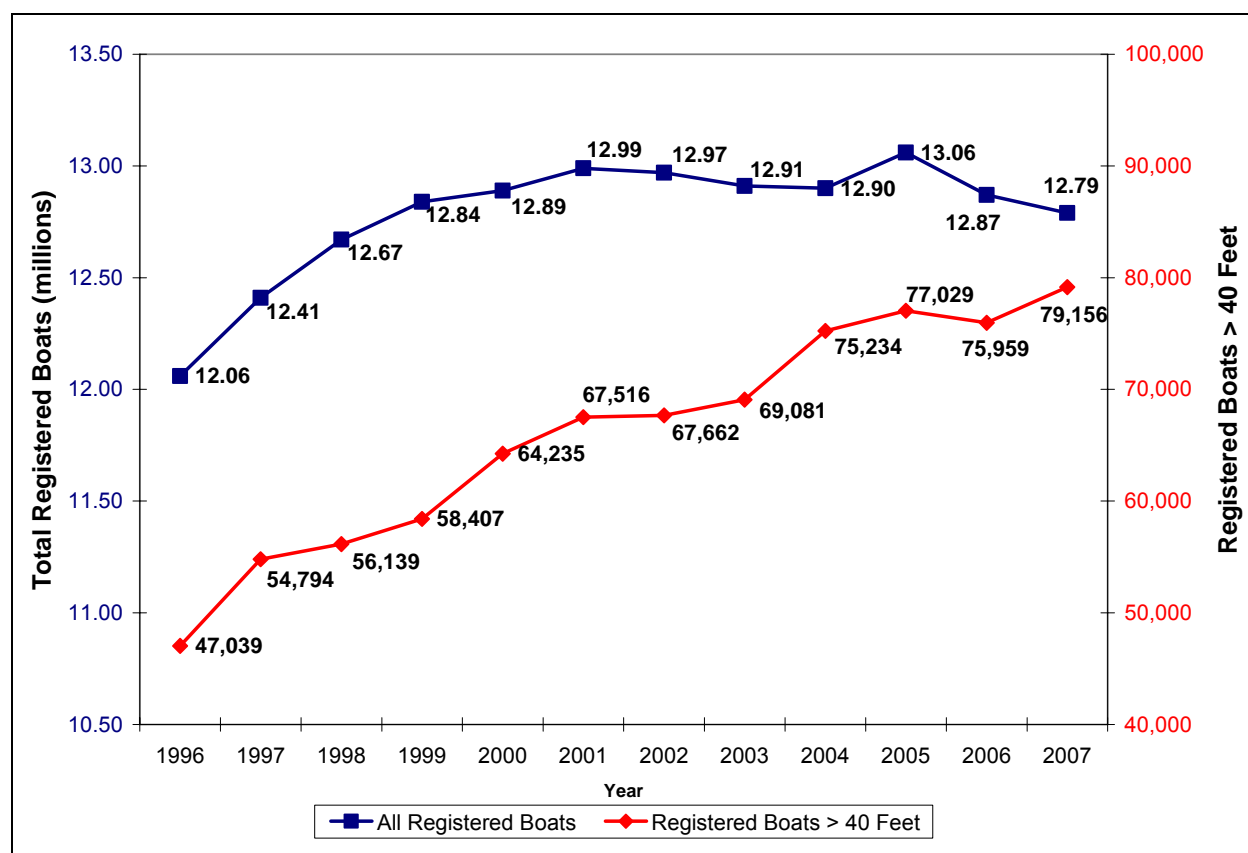
Market expansion and growth, or conversely decline, are influenced by a variety of factors from the national level to the local market. Trends in the boating industry or at marinas in the local and national market provide insight into the size and demand for marina slips. The following sections analyze trends at the national, regional and local levels and determine how these influence the proposed marina at the project site.

3.1 National Boating Trends

While the total number of boats in the world market is difficult to track due to inconsistencies in registration procedures, the Coast Guard and State governments track the registration of U.S. vessels. The National Marine Manufacturers Association (NMMA), a marine industry advocacy group, collects and summarizes boat registration records for each state in an annual U.S. Boat Registration Statistics report as described in the following paragraphs.

Analysis of the U.S. boat registration statistics shows that, on a nationwide basis, boat ownership has fluctuated recently due to the economic instability in the U.S. financial markets and rising fuel and dockage prices. As Figure 3-1 indicates, the significant increases in the late 1990's leveled off after 1999, followed by a slight downward trend then a quick increase in 2005. Registration totals in 2005 exceeded the previous high total from 2001, followed by reduced registration trends down to 1998-1999 levels.

Contrary to the overall trends, boats greater than 40 feet in length consistently increased in demand, as evidenced by the nationwide registration data. In 2007 there were 79,156 vessels over 40 feet long registered in the United States, up 68% from 47,039 vessels in 1996. This trend may be attributed in part to such factors as improvements in the construction and operation of these boats leading to competitive costs, as well as a shift towards older and more affluent population demographics, i.e. "baby boomers," that tend to own and operate larger boats. In the United States, the age of the average boater has continued to get older over the last decade, and will continue with "baby boomers" purchasing newer and larger vessels as they become active retired seniors.



Source: U.S. Coast Guard/NMMA

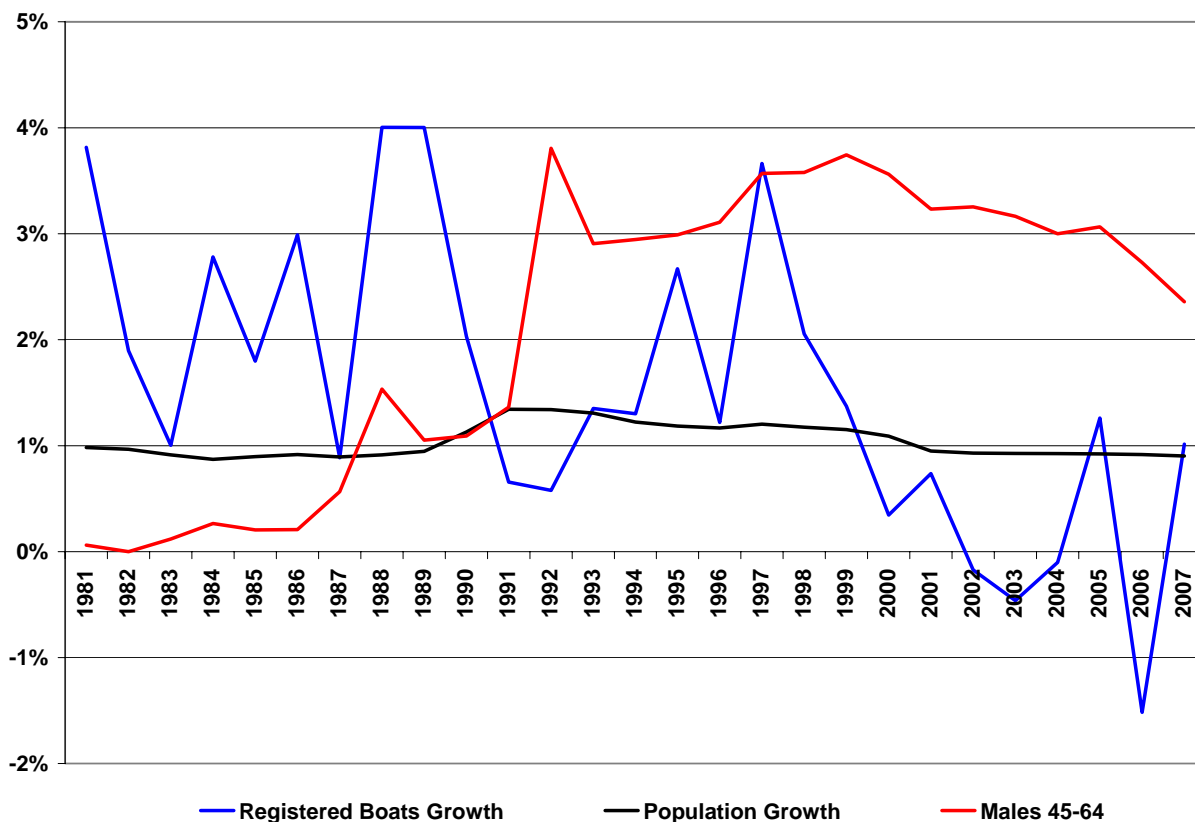
Figure 3-1: Total Recreational Boats Registered in the U.S. (1989-2007)

In 2004, the median age of new boat buyers was 48, with an annual income of \$71,000. Within the new boat buyer sector, the median age of cruising yacht owners was 50, with an annual income of \$134,000, and the median fiberglass sportfishing boat owner was 46, with an annual income of \$64,000.

3.2 Economic Driver Correlation to Boat Ownership

Marine industry experts widely agree that population growth, particularly of the male segment between the ages of 45 to 64, is the main driver of boat sales. While this theory is intuitively pleasing, existing data on boat registrations and population characteristics indicates that there is little reason to believe that such a simple model can fully account for trends observable with available data. Figure 3-2 shows that there is significantly more variation in boat registrations than in total population or middle age male population growth. In the mid-1980's there were sharp increases in registered boat growth while at the same time the male population and overall

population remained relatively flat in growth. Conversely, a decrease in registered boats occurred in 1992 when there was a sharp increase in middle age male population growth.



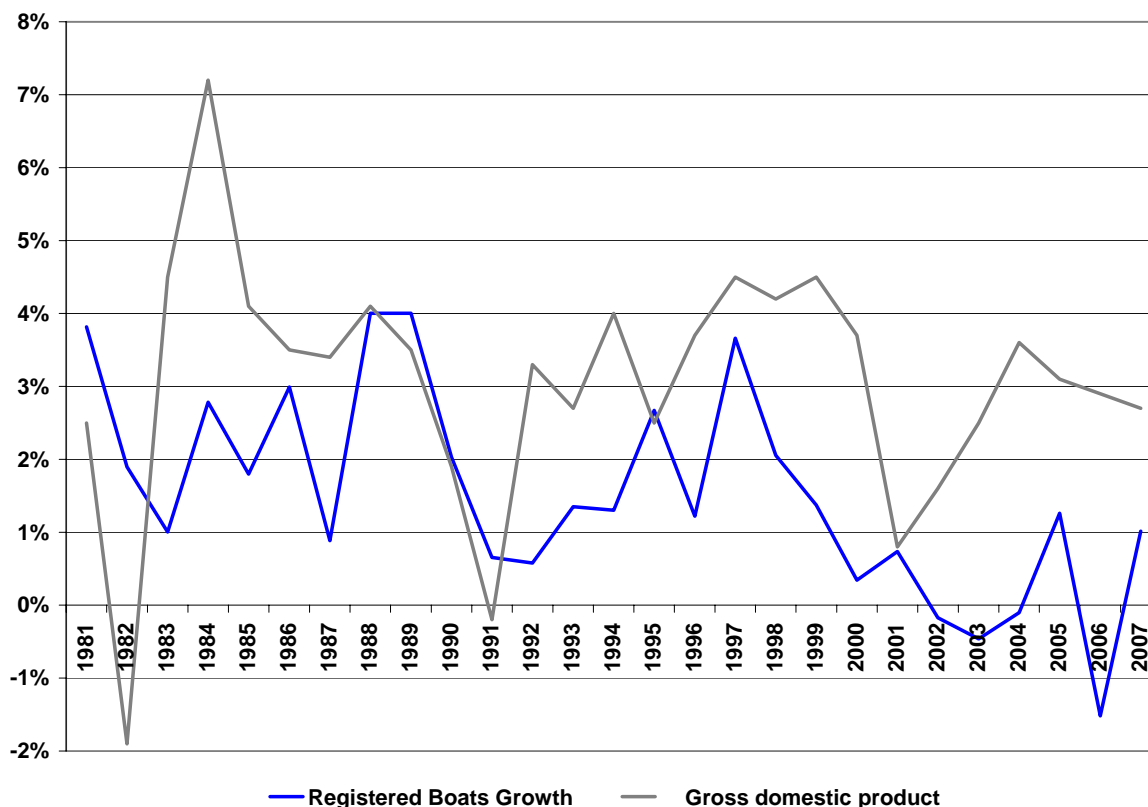
Source: USCG, Census Bureau, Moffatt & Nichol

Figure 3-2: Population Growth and U.S. Registered Boat Growth

The cyclical nature of boat registration growth shown in the chart above corresponds to some extent to real gross domestic product growth shown in Figure 3-3. Boat registrations have slowed significantly during and immediately following recessions. The recent decline in total boat registrations from 2001 – 2007 may also reflect the particularly weak labor market in the United States, where employment growth was slowest over the last several years than in any other similar post-recession period since 1960.

In the boating industry, marinas are typically the last component of the industry to feel the effects of a recession and the first to recover. Many boats remain in use although a decrease in duration and frequency of boating trips during this time often occurs (Ross, 2008). In addition,

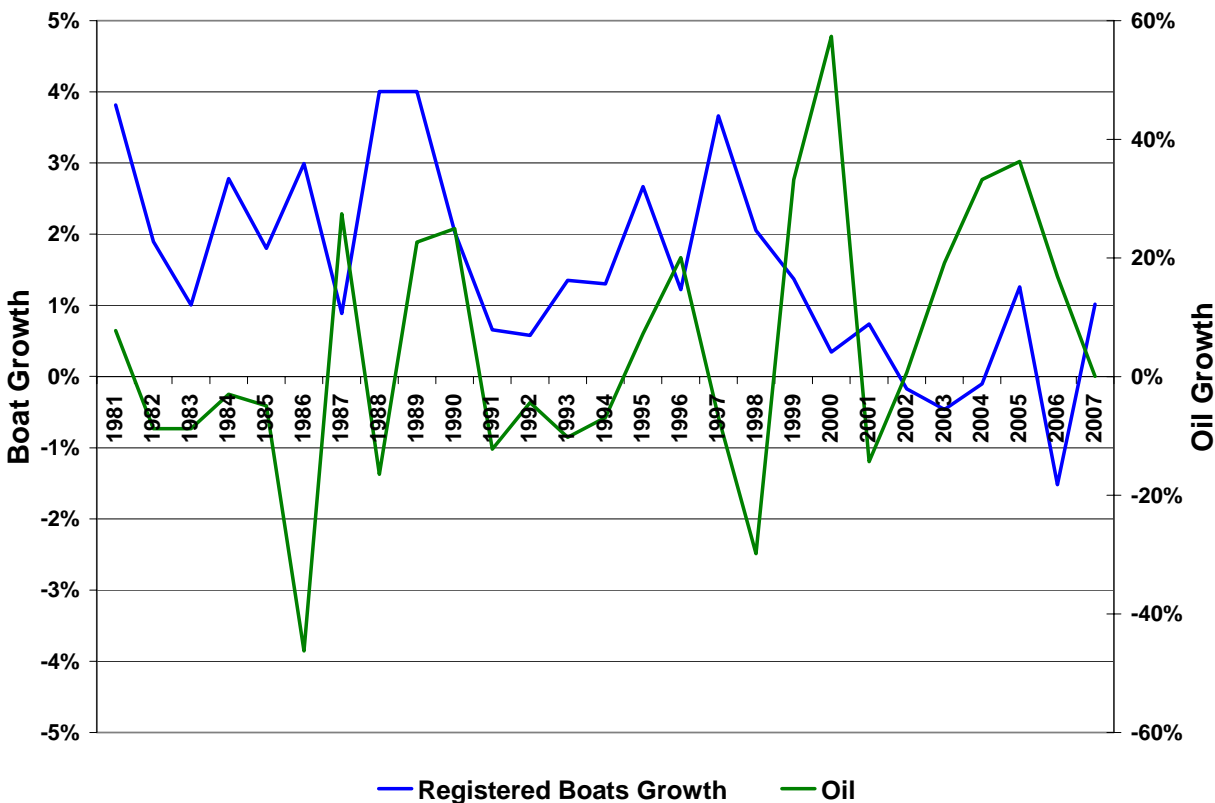
larger boats are limited in landside storage options and typically remain in a marina wet slip out of necessity.



Source: USCG, Department of Commerce (BEA), Moffatt & Nichol

Figure 3-3: Real GDP Growth and U.S. Registered Boat % Growth

Registration data indicates that greater than 90% of registered boats in the United States are motorized. Therefore, it is expected that significant fluctuations in oil prices affect boat sales. Figure 3-4 indicates that this is indeed the case. Registered boat growth tends to slow following sharp oil price rises. Over 80% of the registered boats are trailerable, the majority of which are not stored in marina wet slips. Larger vessels are not trailerable using passenger vehicles and typically remain in a wet slip regardless of the amount of use, somewhat insulating wet slip marinas from extreme occupancy fluctuations due to fuel prices.

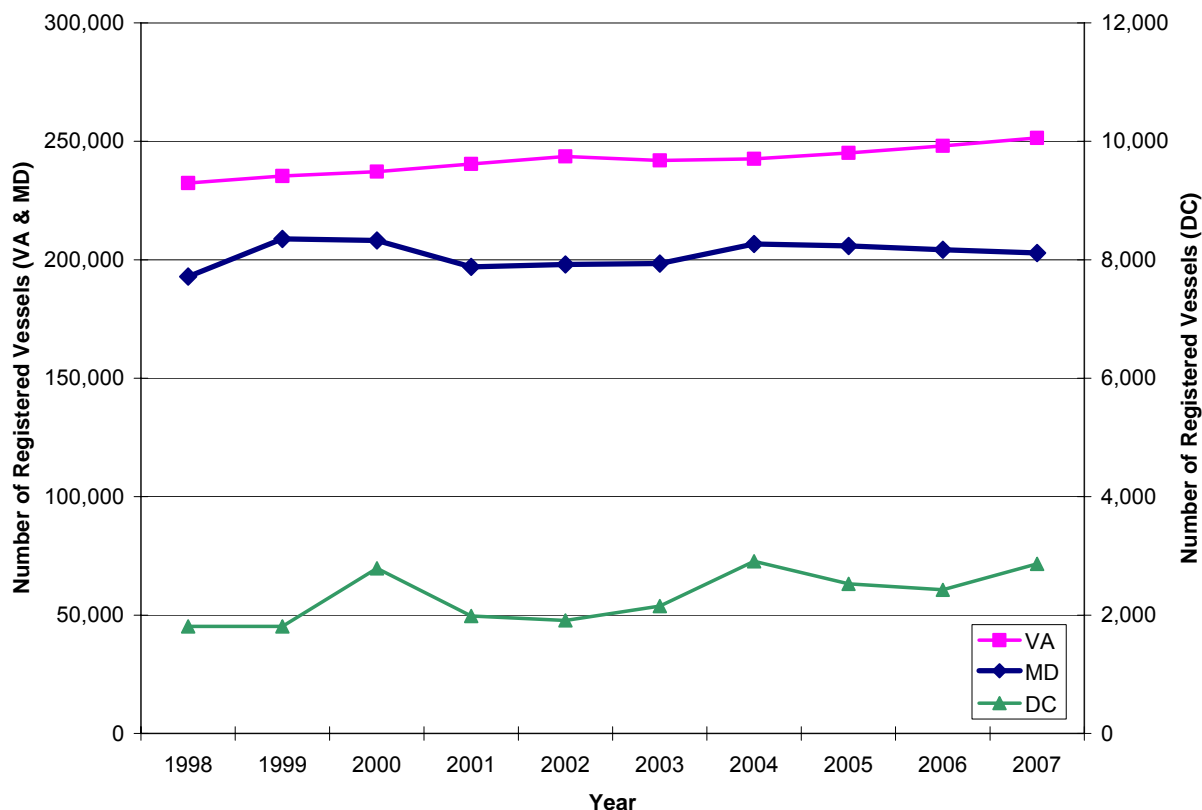


Source: USCG, Moffatt & Nichol

Figure 3-4: Oil Price Fluctuations and U.S. Registered Boat Growth

3.3 Regional/State Boating Trends

Annual boat registration data in Washington, D.C., Virginia and Maryland are shown in Figure 3-5. There has been an increase in these areas of approximately 30,000 vessels in the 10-year period from 1998 to 2007. The majority of these vessels are appearing in the Virginia and Maryland registrations as these states have more boating areas not only in the D.C. market but also in the Chesapeake Bay and other tributaries.

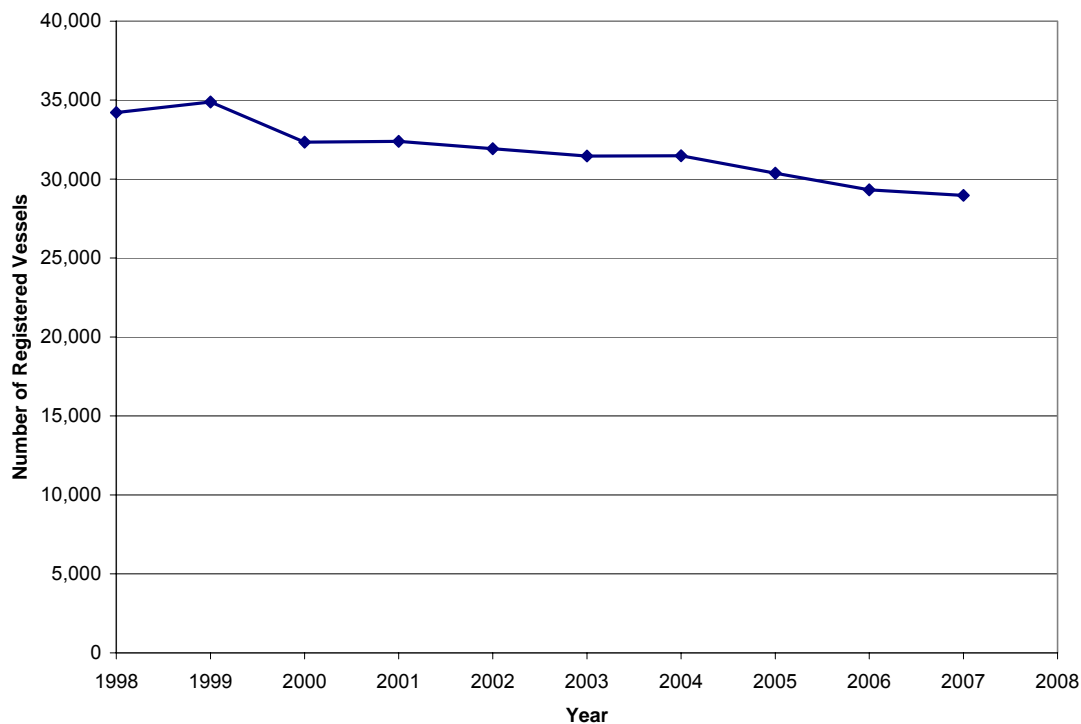


Source: USCG

Figure 3-5: Registered Vessels in the Regional Market

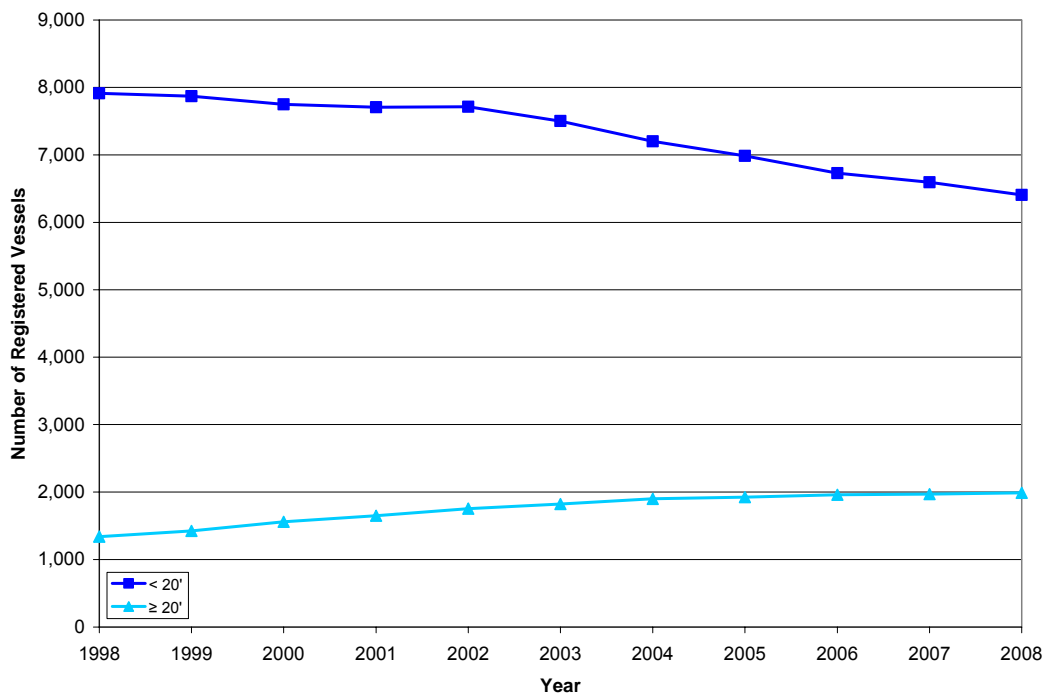
3.4 Local Boating Trends

The number of registered vessels in the market region from 1998 to 2007 is shown in Figure 3-6. Although the trend shows a decline in the number of overall vessels in the market region, dockmasters report continued demand for wet slips and, as shown, the Virginia and Maryland state registrations continue to increase. Vessel registration data for the Virginia portion of the D.C. market is categorized by length and is provided by the Virginia Boat Section Manager. The data indicate that, during the period from 1998 to the present, the number of vessels less than 20 feet decreased by a greater amount than vessels greater than 20 feet increased, as shown in Figure 3-7. Vessels less than 20 feet are typically not berthed in wet slips. While an overall decrease is shown in the registration trends, vessels requiring wet slips continue to increase, which concurs with what the regional dockmasters reported.



Sources: MD DNR, VA Boat Section Manager, USCG

Figure 3-6: Registered Vessels in the D.C. Market

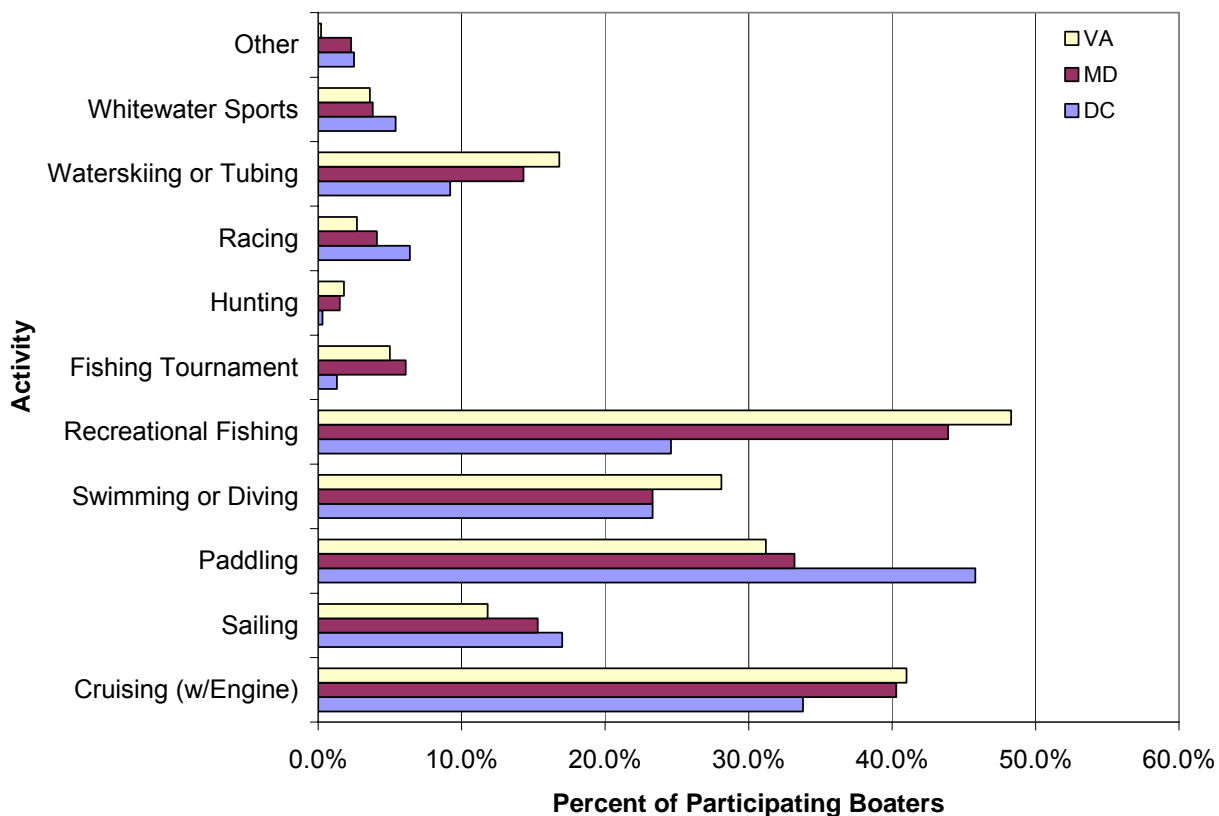


Sources: VA Boat Section Manager

Figure 3-7: Northern Virginia Registered Vessels by Size

Boating Activities

The most popular boating activities in Maryland and Virginia are recreational fishing and cruising, as shown in Figure 3-8. In D.C., paddling is identified as the most popular activity followed by cruising. However, boaters engaging in paddling activities are utilizing smaller vessels that would typically not be stored in a marina wet slip.



Sources: USCG

Figure 3-8: Virginia, Maryland and D.C. Boater Activity Participation

4. MARKET CAPACITY – PROJECTED MARKET

The projected marina market slip capacity reflects the number of slips a proposed marina may expect to occupy. The market capacity also influences the rate at which slips are absorbed and the price at which slips may be leased or sold to reach the desired marina size and absorption rate.

4.1 Market Drivers

Market drivers are the market forces that generate demand for boat slips. The market drivers for each marina region are identified and the slip-taker demand generated by each driver is estimated. Typical market drivers are listed as follows:

- Underserved Existing Population
- Population Growth
- Upland Development
- Transient Boaters
- Charter/Commercial

The following sections outline the impact of these key market drivers in general terms and the relevance to the D.C. marina market.

4.1.1 Existing Underserved Population

While population growth is expected to increase the number of vessels in an area, there are markets that have already reached a saturation point and a portion of the existing population is underserved. That is, there are boaters that seek a slip but insufficient slips are available. The underserved aspect of a market will either keep their vessel further outside of the region or will prevent a potential boater from purchasing a vessel. The extent of the underserved population may be evaluated using several methods as follows.

Marina Slip Wait List

The D.C. market appears to be a saturated market as the majority of the marinas in the market reported wait lists for wet slips. All dockmasters interviewed at the downtown marinas indicated demand for wet slips and that they had wait lists for certain slip sizes. Although some of these marinas have slips available in the 20-foot and 30-foot range the predominant request was for wet slips in the 40-foot and 50-foot range. This aspect of the market currently comprises less than 25% of the available slips. However, as marinas expand and renovate, the dockmasters reported increasing slip sizes to meet the market demand.

As not all marinas in the market keep a wait list and some boaters will be on more than one marina wait list, it is difficult to quantify the number of underserved boaters in the market. A minimum number of underserved vessels may be determined from the Alexandria City Marina wait list which has approximately 50 vessels on it. Wet slips at the Alexandria City Marina are only available to residents of the city; therefore a minimum of 50 boat owners in the City of Alexandria alone seek a wet slip in this area.

Marinas in the downtown region report wet slip waiting lists for most slip sizes. These wait lists range from 50 to 100 slips and appear to be mainly comprised of District workers seeking live-aboards or part-time residency on their boats. The Gangplank Marina currently has the highest number of live-aboard slips (~100 slips) in the D.C. market. Pending plans to renovate the Gangplank Marina may result in temporary increases in demand by displaced boats for wet slips. Depending on construction phasing for the renovation, over 300 total vessels may be temporarily displaced. Some displaced vessels may not return to the Gangplank Marina following construction. These vessels may leave the market completely or relocate to other marinas within the market.

Although the majority of the slips in the market are in the range of 20-feet to 30-feet in length, there is increased demand for larger slips. The 40-foot and longer slips have waiting lists while the smaller slips in the under 40-foot range have seen a decrease in demand in the past year attributed to the economic downturn. The under 40-foot vessels are able to be kept on a trailer

and launched at boat ramps. Boaters are increasingly trailering their boats to cut back on wet slip berthing costs.

Recent economic activity has influenced slip leasing and boating in general. The increase in fuel prices has decreased the number of trips boaters have taken this year. At the Pilot House Marina the dock master indicated that approximately 30-40% of the slips were vacant this year, whereas in the previous five years the marina has had a wait list for slips. Other dock masters have indicated similar trends with boaters in the 20-foot to 40-foot range either switching from wet slip storage to dry storage for their vessels or not using them at all this year. Larger wet slips have not seen a change in occupancy rates. However, dock masters indicate that these boaters are not utilizing their vessels as frequently and are staying closer to the marina during boating trips.

Boats Per Capita

An alternative method to evaluate market saturation and underserved boating population is by comparing registered boats per capita in the market vs. regional boats per capita. Regional boating trends typically correlate to local trends with variations due to market drivers. The existing D.C. marina market rate of boats per capita is 1 boat for every 125 people. This is far less than the statewide per capita boat ownership in Virginia and Maryland which are approximately 1 boat for every 30 people. Although these numbers are vastly different, the coastal areas of Virginia and Maryland are expected to have a higher per capita boat ownership than the more metropolitan areas upriver. This vast difference could indicate that, while the D.C. market will not necessarily support a per capita boat ownership rate equal to the statewide rate of Maryland and Virginia, the per capita boat ownership is lower than expected, indicating an underserved marina market.

Total

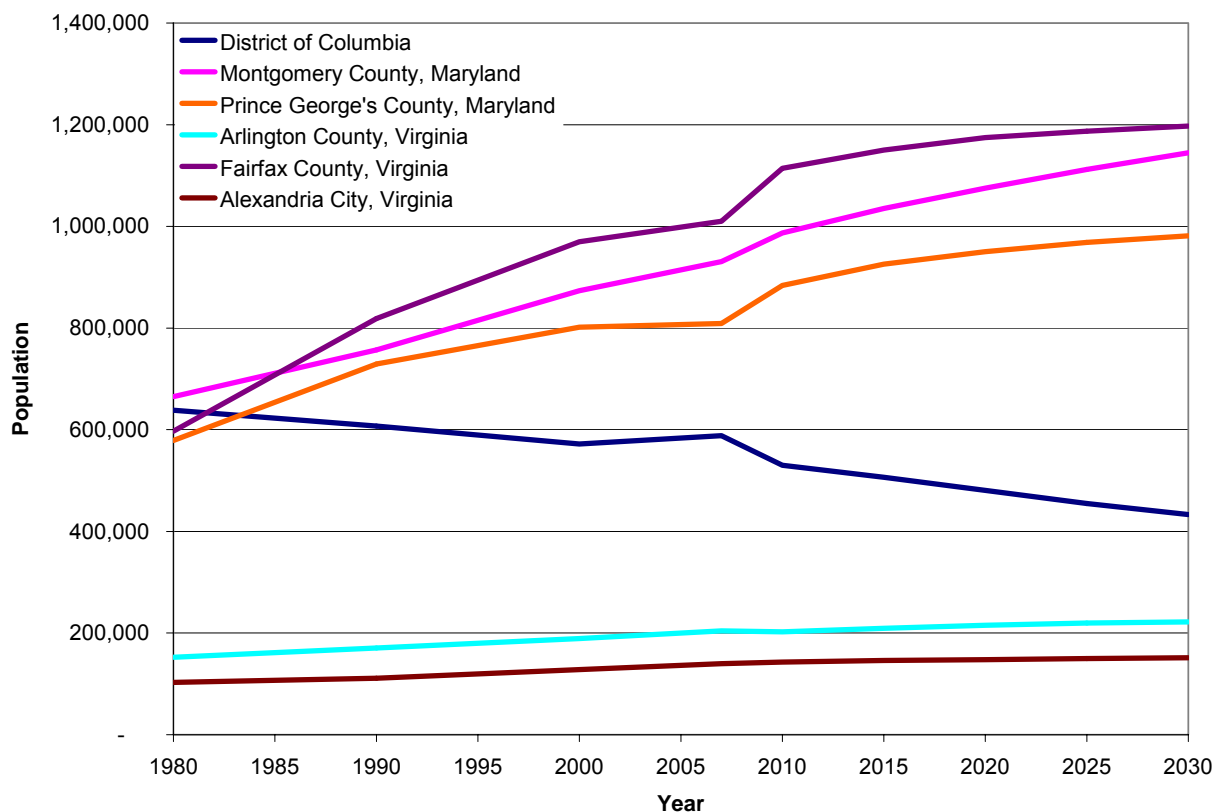
Analysis of these data suggests demand for an additional 70 to 100 slips in the existing market due to underserved population. Properly sized slips would be quickly absorbed into the market at market lease prices.

4.1.2 Population Growth

As an overall population grows, it can be assumed that the boating population will grow at a similar rate. While there are other influences, such as demographic changes in population, that affect the growth of the boating market, the number of boats per capita can be assumed constant, as long as sufficient resources remain to support this increase.

Historical population trends and future projections for the market area show an overall population increase over the period 1980-2030. Although the trend for D.C. shows a decrease in population, the surrounding counties show an increase of a greater magnitude allowing for an increase in the overall market. The overall regional growth in the market is expected to increase 12% between 2007 and 2030, which equates to approximately 450,000 people.

According to Margery Austin Turner and Christopher Snow from the Urban Institute, Washington, D.C. is undergoing a gentrification process in many areas. This process often involves a decrease in the number of housing units available, while keeping the area income intact as people with higher income levels move into areas that previously had lower income occupants (Turner and Snow, 2001). As shown in Table 4-1, the household income has significantly increased in the region. While the average D.C. household income has increased at the slowest rate, the median household income is expected to increase at a greater rate as gentrification plans continue.



Source: U.S. Census Bureau, Northern Virginia Regional Commission, Metropolitan Council of Governments, Maryland State Data Center

Figure 4-1: D.C. Market Population Growth Trends

Table 4-1: D.C. Market Income Demographic Trends

Location	Number of Households		Median Household Income	
	1990	Present	1990	Present
Washington, D.C.	249,634		\$40,088	\$54,317
Montgomery County, MD	282,228	347,625	\$54,089	\$91,835
Prince George's County, MD	258,011	303,232	\$42,127	\$68,370
Arlington County, VA	78,745	97,100	\$44,600	\$91,896
Fairfax County, VA	292,345		\$59,284	\$105,241
Alexandria City, VA	53,280		\$41,472	\$80,806

Boating is a luxury expense and an increase in median household income creates an area where there is a greater possibility of disposable income being spent on this industry. This

demographic shift in income levels can increase the per capita boat ownership above the current level.

Total

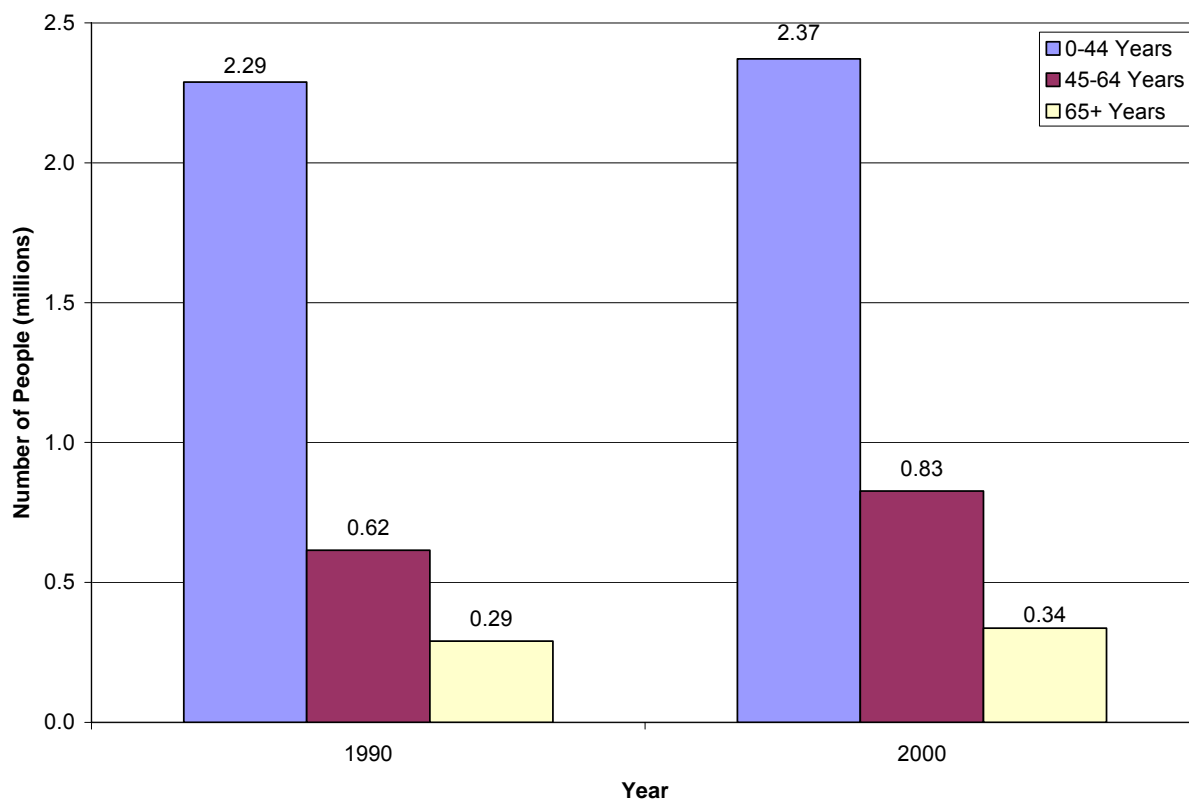
Growth in the market region population will increase the number of vessels present in the market. With the area population expected to increase by approximately 289,000 people by 2015 and a per capita boat ownership of approximately 1 boat per 125 people, an additional 2,300 vessels are expected in the market region by 2015. According to boat registration data, over 90% of vessels in this market are trailerable; as such, approximately 200 to 250 additional wet slips will be needed to meet the demand from population growth. These slips are expected to be absorbed throughout the population growth period at prevailing market rates.

4.1.3 Upland Development

The type of upland development associated with a marina can attract different types of boaters to the project. Residential components of upland developments typically draw long-term boaters and absorption of slips is in line with the upland absorption. Conversely a commercial development will generally attract more transient boaters seeking a temporary stop.

The proposed upland components of the project will include 2,800 permanent residences with a mix of sale and lease units as well as commercial retail development. Some of the potential residential owners may be boat owners and will choose the upland unit based on the presence of a marina at their residence. The number of unit owners expected to occupy a slip can vary greatly, depending on the marketing approach chosen. Typical waterfront resort developments around the world have approximately 5-10% of unit owners occupying a wet slip at the associated marina. As the proposed development is located in a city with proximity to the local activities also attracting unit owners, this percentage is expected to be smaller with closer to 2-3% of unit owners desiring a wet slip.

A change in population age demographics can be indicative of the potential for increases or decreases in the boating market. As shown in Figure 4-2, the population in the market area has shown the greatest increase in the age range of 45-64 years. This the age group is likely to equate to an increase in the number of vessels in the market region.



Source: U.S. Census Bureau

Figure 4-2: D.C. Market Age Demographic Trends

Total

The proposed upland development (residential) is expected to generate demand for 50 to 75 additional slips. Boaters associated with the upland development are expected to be the primary slip takers at the proposed marina and the demand is highly dependent on the marketing approach and integration of the boat slips used to sell the residential units. Other regional residential developments may further contribute slip demand. These slips are expected to be absorbed concurrently with absorption of the residential units.

4.1.4 Transient Boaters

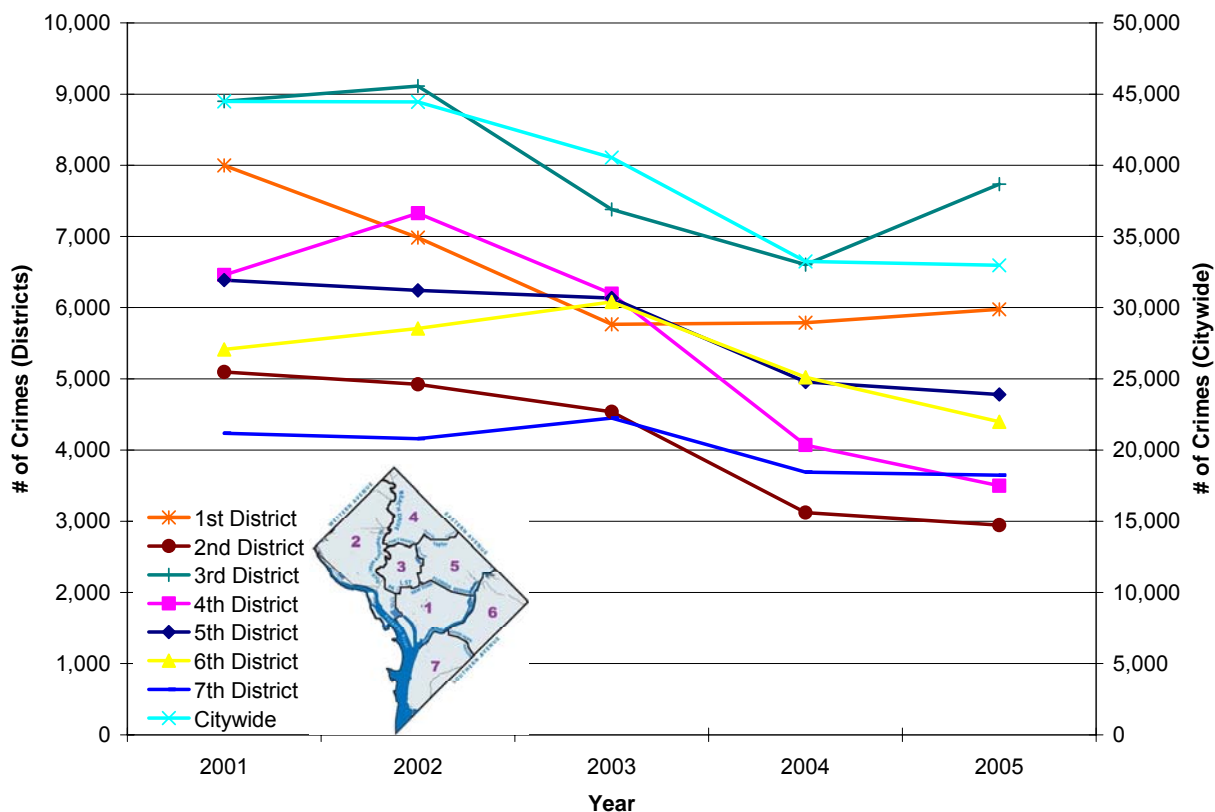
As previously mentioned, the transient boater will generally travel to this region specifically to visit Washington, D.C. These boaters may be interested in seeing the historic and cultural sites such as the monuments along the National Mall or the Smithsonian Museums. Entertainment venues such as the Kennedy Center for the Performing Arts also attract visitors to the area. The

proximity of the proposed marina to the newly constructed Washington Nationals baseball park will create a specific draw to the project. Restaurants, shops and walkways are part of the development in this area, which will provide upland amenities that transient boaters typically desire. These amenities offer an advantage over other marinas and will attract transient boaters to the proposed marina. In addition, the presence of foot traffic is appealing to those boaters wishing to display their vessels in an “ego alley” type of venue.

However, barriers exist to transient vessels visiting the D.C. market. As mentioned previously, the Chesapeake Bay is a day long cruise from Washington, D.C. This is a deterrent for the transient boater that is passing through the mid-Atlantic region. A transient boater passing through a region will stop at marinas along the route that are convenient. They will not spend a day cruising to and from a marina unless it is specifically to visit that area. The proposed marina will not attract transient boaters merely passing through the mid-Atlantic region, but may attract those transient boaters that wish to stop in D.C. for a visit.

In addition to the distance, the recently reconstructed Woodrow Wilson Bridge, connecting Maryland and Virginia across the Potomac River south of D.C, may limit larger vessels from reaching the District. The recently demolished bridge had a navigational clearance of 50 feet and opened 260 times a year while the new bridge with a 75-foot clearance is expected to have an approximately 75 percent reduction to only 65 openings per year (Kozel, 2008). A 75-foot clearance allows for a sailboat of approximately 46 feet LOA to pass under the closed drawbridge.

Downtown marinas also report shortages of parking for marina patrons. Sufficient parking for marina patrons will need to be accounted for during upland development planning. In addition to sufficient parking, vehicle safety is a concern in some areas of D.C. Dock masters have reported that some boat owners will choose not to lease a slip at the marinas along the Anacostia due to concerns with safety for their unattended vehicles and themselves, especially after dark. While crime rates have dropped in this area (District 1) as shown in Figure 4-3, the perception of safety is a concern for attracting boaters.



Source: Metropolitan Police Department

Figure 4-3: D.C. Market Crime Trends

Total

Transient boating is expected to contribute demand for 5 to 15 boaters in the D.C. market. Currently these boaters are accommodated in temporarily vacant slips. These slips are expected to be fully occupied during period of peak demand and potentially unoccupied during the offseason.

4.1.5 Commercial/Charter

Tourism influences aspects of the commercial and charter vessel industry through tour boats, water taxis and fishing vessels, depending on the market region. Local tourism bureaus report that the majority of tourists seek out activities in the region ranging from museums to the monuments.

Many tourists travel around town utilizing public transportation and not just limiting themselves to land. Water taxi service from the Potomac Riverboat Company is available between the Alexandria City Marina, National Harbor Marina, Georgetown and Mount Vernon. These areas are popular for their historic sights, restaurants, nightlife and other activities. The location of the project near the ballpark and adjacent water taxi stop proposed at Diamond Teague will provide additional foot traffic at the project location. While the water taxi service ferries people from one location to another, it also serves as a tour boat offering a guided tour along the way of the various monuments and historic sites. In addition to the taxi service, there are companies that operate at the various marinas that conduct similar river tours. This type of charter business may be attracted to the proposed marina as there will be upland components, including retail shops and the ballpark, which will attract tourists and other transient visitors.



Total

The proposed development is expected to generate demand for up to an additional ten commercial or charter operators.

4.2 Existing Market Lease Rate Analysis

A newer marina typically has modern amenities and facilities and can command higher lease prices because of these aspects. The proposed marina will be located in an area that is currently undergoing development to increase the appeal of the region and attractiveness of living in the city. Proximity to the ballpark and recently developed government infrastructure will add to the areas potential to attract boaters. These features will allow the proposed marina to charge slip lease rates on the higher end of the market range in line with the downtown marinas from approximately \$2-\$3 per foot per day for transients, \$9-\$15 per foot per month for monthly leases and \$9-\$13 per foot per month for annual leases.

4.3 Slip Occupancy

The D.C. marina market is primarily comprised of long-term leases and does not have a highly prevalent transient market. Saturation of the market appears to have been reached with 95-100% occupancy reported and marina owners and operators reporting wait lists, especially for vessels above 40 feet.

The slips in the market predominantly cater to the small craft class of vessels with 77% of the slips less than 40 feet in length as shown in Table 2-1. This range of vessels was reported as having limited availability at several marinas, allowing for some level of vacancy in the market.

The demand for slips in the D.C. marina market region is high with a strong focus on long-term (annual) slip leases. Occupancy is reportedly above 95% market wide and is at 100% at the most popular facilities. Marinas operators indicated lengthy waiting lists requiring several years for boaters to be offered a slip, especially for those 40 feet and greater in length. As such, prospective vessel owners are often forced to wait until a slip is available before purchasing the boat.

4.4 Projected Slip Absorption

Slip absorption rates for new marinas are influenced by factors including the economy, market demand, and lease rates. In a saturated market with a strong economy, slips will be absorbed faster than in a market that has existing excess slips with a population that is decreasing luxury spending.

The majority of the slip takers are expected to be residents in the adjacent upland development. Slip absorption rates depend not only on demand but also on the quality of the slips and services being provided, advertising and public awareness of the slips, and pricing. Pre-sales generally result in high first year absorption rates (up to 40 to 50 slips) with subsequent year absorption dropping in half.

5. MARINA DESIGN CONSIDERATIONS

Several factors influence marina design, including site conditions and client needs for the project. Environmental conditions can affect the type of docks used while site constraints can affect the layout. The following sections identify the aspects of the site that will influence the design of the marina.

5.1 Site Conditions

Various site conditions, both natural and artificial, influence the layout of the proposed marina including access and water conditions. The site is adjacent to a federal channel which, while providing sufficient depths for access, impacts the distance offshore the marina can be located to provide clearance from the channel.

Currents and wave climate may also influence the type of dock construction materials that are used to withstand the loading. In addition, concern with pollution in the river, coupled with strong currents and the wave climate, create an environment that will need to be considered when choosing dock material for a specific project design life.

Coordination with the Washington Metropolitan Area Transit Authority (WMATA) is required where the proposed marina is over the subway tunnel in the Anacostia.

5.2 Dock Structures

Dock structures in marina design are chosen based on environmental conditions and client needs. The environmental factors that influence the dock type at the project site include tide range and wave climate and currents. Docks may be either fixed or floating structures and can be constructed of a variety of materials including wood, concrete, metal and composite materials.

Tides at the project site are on the order of 3 feet as reported at the tide gauge located at the Police and Fire Harbor Patrol Office on the Washington Channel. In areas of high tidal fluctuation, floating docks have become more prevalent as they allow a constant freeboard to be maintained between the dock and the boat.

A variety of slips are represented in the market with fixed, floating and lift slips available both uncovered and covered. Construction materials range from wood to composite material with examples of metal and concrete docks. Although a variety of docks are present in the market, the majority of marinas are comprised of floating wood docks with double load slips. Table 5-1 outlines the frequency of dock types in the market with some marinas having more than one dock type.

Table 5-1: Dock Type Prevalence in the D.C. Market

Dock Type	
Fixed	11
Floating	19
Deck Material	
Wood	23
Concrete	2
Composite	2
Aluminum	1

Each dock material type has advantages and disadvantages. In the D.C. market, timber is the typical construction material utilized for fixed docks and wood decks on an aluminum frame for floating docks. Wood and metal are readily available and generally cost less than concrete while concrete has a longer life cycle and better durability.

Regional trends and boater preferences influence the slip configuration. Slips may be either single or double “loaded” meaning they may be configured to berth one or two vessels, respectively, between finger piers. Double loaded slips potentially offer greater flexibility by omitting a mooring pile between the vessels whereby the slip may accommodate a wider vessel than would be possible in a fixed width slip.

The width of the slips must be sufficiently wide to accept a high percentage of vessels in the target length classes. Current yacht construction trends show that vessels are being built with wider beams. Yacht builders are increasing the usable square footage on vessels by increasing widths up to 25% without increasing the length proportionally. Figure 5-1 shows the distribution of yacht beam to length.

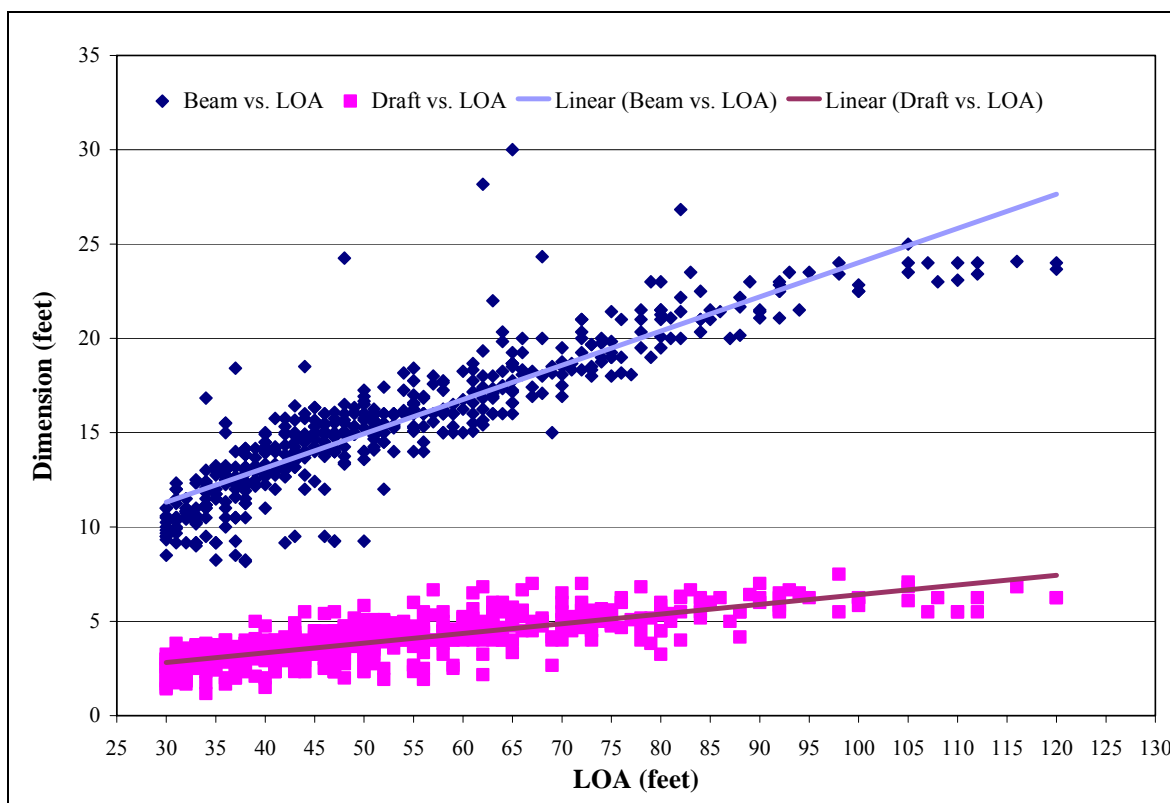


Figure 5-1: Boat Dimension by LOA

5.3 Amenities

As boats become more technologically laden and require increasing resources to operate, marinas must provide an increasing level of amenities to cater to these clients. Boaters moored at any marina will expect amenities and services commensurate with their needs. Ancillary services correctly catered to the desired clientele will attract additional vessels to the proposed project marina. The following sections outline typical and ancillary amenities found in modern marinas.

5.3.1 Basic Amenities

Basic Amenities are those that are typically found at the marina for use by each vessel, either freely or for a fee, and are classified as either utilities or ancillary amenities.



Potable Water – In addition to washdowns at the docks, many larger boats include onboard water tanks for restrooms and kitchen use that require replenishment while at berth. All dockside water should be a regulated, potable system capable of filling storage tanks without damage to boat plumbing. Consideration should be also given to accommodating external water purification, conditioning, and filtration systems carried by many yachts. If conditioning is not incorporated into the main plumbing, the systems may require a location on the dock adjacent to the water supply. The existing public water utility is anticipated to supply a sufficient source of potable water service to the marina. Branch connections may be made from a main line to service the berths in the marina. Water demand is estimated to be approximately 25 gallons of water per slip per day during peak demand (Tobiasson, 2000) for vessels less than 100 feet. For vessels larger than 100 feet, the demand is estimated at 50 gallons a day.

Electric – The number of onboard amenities has increased the electrical demand of yachts. While many large yachts now have the capability of providing their own electrical service, land-based service is

preferred to the noise of running generators full time on each yacht while at berth. Typical vessel electrical requirements per boat are estimated in Table 5-2.

Electric services should range from 50 to 100 amps with special provisions made for multiple or three-phase hookups for the largest yachts. Typically,

Table 5-2: Vessel Electrical Requirements

Boat Length	Number	Amps	Volts	Phase	Amps Supplied
20'-34' 11"	1	30	120	1Φ	30
35'-44' 11"	2	30	120	1Φ	
	1	50	120 /240	1Φ	60
45'-59' 11"	2	50	120 /240	1Φ	100
60'-79' 11"	2	50	120 /240	1Φ	
	1	100	240	1Φ	100
80'-89' 11"	2	50	120 /240	1Φ	
	1	100	240	1Φ	100
	1	100	208	3Φ	100
90'-139' 11"	2	50	120 /240	1Φ	
	2	100	240	1Φ	200
	2	100	208	3Φ	200

Source: Moffatt & Nichol

vessels less than 80 feet in length are regulated to need only 50 amp service while those from 110 to 130 feet may require multiple receptacles providing upwards of 100 amps.

Dock Lighting – Lighting along the dock is provided for safety and security reasons. This amenity can be provided as either independent lighting fixtures along the dock or as part of the power pedestal configuration.



Sanitary – Sanitary systems are designed to be either centralized or located at each slip. A centralized system is less expensive to install, can be easily staffed with marina employees and is less prone to maintenance issues caused by improper use by boat owners. Service at each slip facilitates proper disposal of wastes by eliminating waiting lines. Some owners will discharge out at sea or in the marina rather than wait in line or return at a later time to a pump-out facility. Consequently, the provision of clean, well-outfitted, well lighted, and accessible shore-side sanitary facilities reduces the stress on the onboard systems and discourages the use of on-board sewage flow through devices.



The number of pump-outs should conveniently serve the target market. Long waits tend to discourage users. The sewage may be pumped into an on-site holding tank from which it is discharged into the municipal sanitary sewer system. The pump-out should be centrally located and easily accessible and also located nearby to fuel dispensing operations. In-slip pump-out facilities provide an added level of service that may support higher lease rates.

To prevent accidental discharges, trained staff should be available to assist boaters with pump-out operations.

Parking – Sufficient parking should be provided in close proximity to the slips to facilitate loading/unloading of passengers and cargo. Guidelines recommend a ratio of 0.50 parking spaces per slip.

Solid Waste Collection – Trash floating in the marina is unsightly and must be removed by staff and it remains an ongoing (but necessary) maintenance issue. Consequently, all boaters should be encouraged to properly dispose of trash by providing multiple large, covered, convenient trash receptacles. In addition, covered receptacles prevent birds and rodents from accessing and spreading collected trash.



Internet/Telephone/TV (Cable or Satellite) – The increased desire and expectation for amenities such as telephone, cable television, and high-speed internet access has risen for marinas in recent decades. Likewise, the availability and use of cellular phones and satellite TV service has also increased to meet this demand. When planning communications infrastructure, the continued rapid growth in new technologies and quick obsolescence of existing technologies must be considered.

Direct telephone wiring to each slip, while providing standard telephone service, also requires the installation of additional equipment to handle the various lines as well as knowledgeable staff to activate and deactivate the lines as necessary. With the increase in Internet Telephony and alternate service providers, direct telephone wiring to each slip is no longer required. Telephone service may be provided through cable television service or using Voice-Over-IP (VOIP) technology with wireless internet services. These technologies also require that the staff have a minimal level of proficiency with the system to provide service to the boat owners.

While many medium length yachts in the United States have portable satellite television dishes temporarily mounted on the dock boxes or railings and larger vessels often have these dishes permanently mounted on their decks for reception anywhere in the world, cable television

hookups at each slip may be desirable. An option that is gaining popularity in modern marinas is to have a central satellite television hub in an administrative building that is subsequently linked to individual yachts with a use fee associated with the service.

Internet connections are used by visiting families and businessmen. In addition, most new navigation systems are updated via internet. Wireless services may be provided with minimal infrastructure requirements but may require more expensive equipment and a technically proficient staff to maintain. Wired service connections may be incorporated into electrical pedestals and may have higher initial and maintenance costs.

Fuel – Motorboats are powered by either gasoline or diesel fuel and fuel capacity can range from several hundred gallons to over twenty thousand gallons for the largest yachts. To provide service for these fueling needs, most marinas have fueling facilities either attached to the marina or available from another vendor nearby. High Speed Fueling allows large vessels to refuel quickly.



Fire Protection - Modern marinas require that fire-fighting equipment be capable of combating fires quickly and effectively, while preventing the fire from spreading to other vessels within the marina. The most common types of fires in marinas are those fueled by flammable liquids, such as diesel, oil, or gasoline.



The possibility of the fire spreading to other vessels along the water surface must be considered, especially when combating such a fire with water, which may push the fire along the water's surface. For this reason, large dry chemical fire extinguishers to suppress Class B (fuel), as well as Class A (wood/paper) and C (electrical) fire, should be readily available at key locations throughout the marina. This equipment should be provided in tandem with a centralized high volume water system.

Service Distribution - Marina utility power pedestals may be used to provide yachts with a single source for water, telephone, cable television, and electrical hookups while also providing low-glare lighting and racks for cables and hoses. These units are also designed for easy accessibility to wires and connections while being serviced or repaired. These units may be provided at each individual dock or shared between two adjacent docks. Low-glare / low-level lighting should be provided throughout the marina to provide an atmosphere of safety as well as increase the aesthetic appeal of the marina.

Dock Boxes – Dock boxes are available either rectangular in shape or triangular to fit on the corner weldments of docks. Rectangular boxes generally provide more efficient storage for typical boaters than corner boxes.



Security – Boat owners seek a sense of security from thievery and vandalism while their boat is in the marina. Security measures implemented for the marina should be visible to act as a deterrent while not being intimidating or obtrusive to marina patrons. Such examples may include security staff augmented by video surveillance, monitored vessel access alarm systems, and the creation of secure areas using physical barriers such as fences and gates. Marina security should also include the use of appropriate lighting along walkways and public areas throughout the marina, which also acts to help ensure safe access by all users of the facilities.

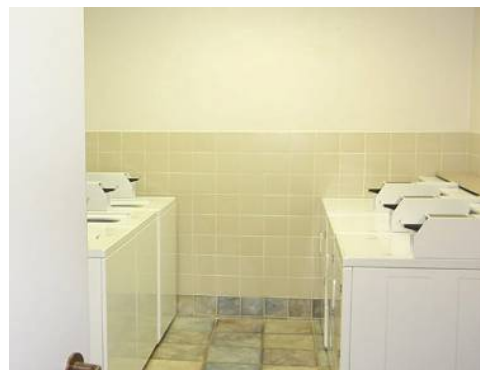
Limited access docking configurations provide a means to limit access to berthing areas through the installation of a security gate at each access point that may be controlled with access codes or key cards combined with the physical separation of a marginal dock from the bulkhead.

5.4 Ancillary Amenities:

There are a number of ancillary amenities that many yachters prefer to see offered by a marina and provision of as many of these as viable will help to enhance the competitiveness of the facility. Some of these amenities may be more attractive to transient boaters than resident boaters.

Restrooms and Showers – Not all boats contain onboard restrooms or shower facilities and many passengers and crews are encouraged to use landside facilities when berthed. Restroom and shower facilities are expected to be clean, private and plentiful.

Laundry – Commercial laundry facilities may be used for cleaning on-board linens and are desirable for transient boat crews and families. Users expect these facilities to be clean and plentiful in a well lighted location at all times.



Storage – Nearby storage facilities allow boaters to store equipment at the marina off the boat reducing the risk of theft. Storage lockers or small storage units may be provided for a fee.

Fishing Related – The popularity of recreational fishing offers opportunities for related amenities be available to accommodate and attract fishermen to the marina. A location may be provided for cleaning fish to keep wastes from polluting marina waters and creating offensive odors affecting other boaters. The fish cleaning table in the adjacent image grinds fish waste for disposal in a sanitary sewer. Fishermen also need sufficient ice for preserving their catch.



Ice – In addition to fishing uses, ice is also needed by other boaters to keep perishable foods and beverages cold. Commercially bagged ice is typically available for purchase at marinas.

Yacht Rental/Brokerage – Onsite yacht rental or brokerage agencies provide boating opportunities for visitors to the facility to engage in new boating experiences and generate activity and visibility for the marina.

Shopping and Restaurants – Vacationing and local boaters will utilize shopping and restaurants as part of their entertainment itinerary. Onsite commercial spaces or transportation to nearby businesses may increase marina activity.

Environment – Rules should be clearly posted to minimize the amount of noise generated by boat operations and marina guests. Boat no-wake zones should be strictly enforced for the comfort of the guests as well as the protection of the environment. Provision of absorbent pads may be considered for keeping contaminants in boat bilges out of the marina and facilities for used engine oil disposal may be desirable for use by yachts on longer stays. Maintenance of vessels while at berth should be kept at a minimum or not allowed.

Access – Access ramps and similar provisions may be considered for the disabled and physically challenged.

Wash Down Station – An area for washing down vessels after use as well as an area for drying sails are amenities that patrons desire to maintain the life and performance of their vessels.

5.5 Premium Amenities

The following amenities are being seen in more of the newly developed marinas and are aimed at catering to the luxury customer who expects a very high-quality level of service and access to key amenities.

Transportation – On-site transportation is necessary to allow boaters to move themselves and goods about the marina. Push carts are the standard mode of transporting goods at a marina of this size. Availability of transportation on-site for travel to other areas of the city is also desirable including airport shuttles, water taxi/ferry, bus stop, bikes and golf carts.



Provisioning – Motorboats and large yachts on extended cruises will occasionally take on food and fuel supplies. Some yachts will visit a marina for no other reason than to re-provision. Interviews with yacht captains indicate that provisioning, along with nearby airport access for passenger transportation, is the primary draw to a marina. Many facilities have started offering call-ahead service to have the items waiting for the yachts arrival and will make special orders for items that are not commonly stocked. Fine wines and flowers are popular provisioning items for luxury yachts.

Concierge Services – Concierge services at a marina are similar to those in a hotel. The concierge is available to answer questions, make reservations, and accommodate special requests. The concierge should meet owners at the slip upon arrival, provide maps of facilities and lists of available amenities (i.e. golfing tee times, restaurant recommendations, shopping), and offer to provide transportation for luggage and passengers via a golf cart or similar transportation. The Concierge may also be able to arrange reservations for restaurants and tickets to local events.

Spa/Beauty/Gym – Spas, beauty salons, and gyms are becoming popular amenities for non-boating family members traveling with boaters.

6. MARINA CASH FLOW ANALYSIS

The objective of this marina cash flow analysis is to evaluate projected revenue and costs for the proposed Yards Marina concepts. The analysis is projected over the first 5 years of marina operations after which it is assumed that annual revenue and costs will remain consistent with year 5 levels.

Marina occupancy and slip absorption are based on analyses summarized in this marina market study. Costs and expenses are assumed to increase an average of 4% per year.

6.1 Cost analysis

Marina costs are expected include the following items:

- Initial Construction Cost
- Maintenance Cost
- Staff Salaries
- Insurance
- Miscellaneous

These expenses are projected out over the first 5 years of marina operations.

6.1.1 Initial Construction Cost

Initial construction cost is based on the concept level cost estimate. Repayment of construction cost and interest rates are to be determined and are not directly included in the cost analysis.

6.1.2 Maintenance Cost

Dock systems require ongoing maintenance due to the harsh environment and active nature of marinas. Annual maintenance costs are can range from 1% to 2% of the initial dock costs depending on the dock material chosen.

6.1.3 Staff Salaries

Projected staffing levels are outlined in Table 6-1. Initial staffing levels during the first year of operations are assumed to be half of the full staffing level due to the projected dock absorption rates.

Table 6-1: Marina Staffing Estimate

Position	Number	Annual Salary	Estimated Benefits	Total Compensation	Total Cost
General Manager	1	\$80,000.00	\$20,000.00	\$100,000.00	\$100,000.00
Controller/Accountant	1	\$75,000.00	\$18,750.00	\$93,750.00	\$93,750.00
Dockmaster	1	\$75,000.00	\$18,750.00	\$93,750.00	\$93,750.00
Assistant Dockmaster	1	\$40,000.00	\$10,000.00	\$50,000.00	\$50,000.00
Maintenance I	1	\$40,000.00	\$10,000.00	\$50,000.00	\$50,000.00
Clerk I	1	\$35,000.00	\$8,750.00	\$43,750.00	\$43,750.00
Totals		\$345,000.00	\$86,250.00	\$431,250.00	\$431,250.00
Monthly Expense					\$35,937.50

6.1.4 Insurance

Insurance is highly variable based on location, infrastructure costs, and coverage type. Insurance coverage for the dock structures may be up to 2% of the initial dock costs.

6.2 Revenue analysis

The following significant revenue sources are identified for The Yards marina operations:

- Slip Lease
- Marina Utility Fees
- Fuel Dock Sales
- Ship's Store Sales
- Miscellaneous

Revenue collected from each of these sources is based upon market rates as described in this marina market assessment combined with typical industry use rates. Revenues may be higher or lower based upon the effectiveness of marketing for the marina's services.

6.2.1 Slip Lease

Slip leasing is the primary source of marina revenue. Slip lease revenue includes the price per linear foot of dockage combined with occupancy levels. Not included in this analysis is collection loss (unpaid accounts). Table 6-2 shows the number of slips and the resulting linear footage two alternatives.

Table 6-2: Slip Lease Revenue

	Alternative 1-2-H1A
Slips	49
LF	2,330
Lease Rate /ft/Month	\$13.00
Lease Rate /ft/Day	\$3.00
Full Occupancy	95%

6.2.2 Fuel

Fuel dock revenues are based on industry standard consumption estimates and the existing market as defined in the marina market assessment.

Consumption estimates include sailboats converted to motor boat equivalents based on the reduced projected consumption rate of sailboats. Additional vessels from the existing regional market are also expected to use the facility to re-fuel.

Fuel profit per gallon and gallons consumed may vary significantly depending on demand and market fuel prices.

Table 6-3: Fuel Revenue

	Alternative 1-2-H1A
Marina Slips	49
Regional Capture	40
Total Slips	89
Motor %	90%
Sail %	10%
Sail Equivalent Fuel	10%
Motor Slip Equivalent	80.99
Gallons Per Slip Per Year	500.00
Total Gallons	40,495.00
Profit Per Gallon	\$0.50
Annual Profit	\$20,247.50
Monthly Profit	\$1,687.29

6.2.3 Utility

Boats at the marina are expected to use available amenities including electric power, water, and communications (internet, telephone, television). Electric and water are expected to be metered at each slip with costs paid by the user to the utility providing service. Many marinas charge the users a connection fee for use of the marina's infrastructure and to cover maintenance costs. These fees may be charge on an annual basis for long term lease

Table 6-4: Utility Revenue

	Alternative 1-2-H1A
Hookup Fee Per Yr	\$50
Annual Boats	49.00
Hookup Fee Per Day (transient)	\$15
Transient Boat Hookups	100.00
Annual Profit	3,950.00
Monthly Profit	\$329.17

holders and on a per use basis for transient visitors. Table 6-4 outlines the proposed fee schedule.

6.2.4 Ship's Store

A ship's store provides supplies to boaters including food and beverage, bait, boating supplies, and apparel. The store may either be run by the marina or leased to a private operator. Table 6-5 shows a revenue scenario for the marina owned ship's store. The store may be staffed by the marina employed and in not expected to require additional personnel. Revenue may be higher or lower depending upon level of service, convenience, and competitive pricing of the

Table 6-5: Ship's Store Revenue

	Alternative 1-2-H1A
Net Profit per Week	\$245.00
Logoed Apparel	
Food/Soft Drinks	
Beer	
Ice	
Bait	
Charts	
Fishing Gear	
Misc.	
Annual Profit	\$12,740.00
Monthly Profit	\$1061.67

goods.

6.2.5 Miscellaneous

Miscellaneous additional revenue, shown in Table 6-6, may be generated by providing additional services and implementing marina related upland programming. Examples of additional revenue sources include storage locker leasing, boat preparation and washdown services, and dockbox sales or leasing.

Table 6-6: Miscellaneous

	Alternative 1-2-H1A
Miscellaneous	\$3,000.00
Annual Profit	\$3,000.00
Monthly Profit	\$250.00

6.3 Cost and Revenue Analysis

The following table summarizes the costs and revenues described above. These costs and revenues may be considered a typical example based on Alternative 1-2-H1A and are expected to vary up to 20 percent higher or lower.

The cost and revenue analysis shows a cumulative potential positive cash flow of approximately \$209,000 at the conclusion of year 5 with the potential for \$57,500 per year positive cash flow in the ensuing years.

The Yards Marina Alternative 1-2-H1A Costs and Revenue

REVENUE PROJECTIONS (MONTHLY)

Slip Lease (Monthly)	\$	13.00
Slip Lease (Transient)	\$	3.00
Fuel Sales Profit	\$	1,687.29
Ship's Store Profit	\$	1,061.67
Utility Profit	\$	329.17
Misc Profit	\$	250.00

EXPENSE PROJECTIONS (MONTHLY)

Salaries	(\$20,312.50)	/month
Maint. (1% Dock Costs/Yr)	(\$858.33)	/month
Insurance (2% Dock Costs/Yr)	(\$1,716.67)	/month
Misc	(\$1,000.00)	/month

INFLATION RATES

Average Annual Increase	4%
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Month	Monthly Occupancy %	Monthly Lease Revenue \$	Avg. Daily Transient Occupancy %	Transient Lease Revenue \$	Total Gross Revenue	Total Gross Expenses	Net Revenue
		13.00		3.00			
1	10%	\$2,340.00	5%	\$720.00	\$6,388.13	(\$13,731.25)	(\$7,343.13)
2	10%	\$2,347.80	5%	\$722.40	\$6,409.42	(\$13,731.25)	(\$7,321.83)
3	10%	\$2,355.60	5%	\$724.80	\$6,430.71	(\$13,731.25)	(\$7,300.54)
4	10%	\$2,363.40	5%	\$727.20	\$6,452.01	(\$13,731.25)	(\$7,279.24)
5	25%	\$5,928.00	5%	\$729.60	\$10,030.10	(\$13,731.25)	(\$3,701.15)
6	25%	\$5,947.50	5%	\$732.00	\$10,063.09	(\$13,731.25)	(\$3,668.16)
7	25%	\$5,967.00	20%	\$2,937.60	\$12,299.29	(\$13,731.25)	(\$1,431.96)
8	25%	\$5,986.50	20%	\$2,947.20	\$12,339.48	(\$13,731.25)	(\$1,391.77)
9	50%	\$12,012.00	20%	\$2,956.80	\$18,385.68	(\$13,731.25)	\$4,654.43
10	50%	\$12,051.00	20%	\$2,966.40	\$18,445.37	(\$13,731.25)	\$4,714.12
11	50%	\$12,090.00	20%	\$2,976.00	\$18,505.06	(\$13,731.25)	\$4,773.81
12	50%	\$12,129.00	20%	\$2,985.60	\$18,564.76	(\$13,731.25)	\$4,833.51
13	75%	\$18,252.00	10%	\$1,497.60	\$23,210.85	(\$24,843.00)	(\$1,632.15)
14	75%	\$18,310.50	10%	\$1,502.40	\$23,285.24	(\$24,843.00)	(\$1,557.76)
15	75%	\$18,369.00	10%	\$1,507.20	\$23,359.64	(\$24,843.00)	(\$1,483.36)
16	75%	\$18,427.50	10%	\$1,512.00	\$23,434.03	(\$24,843.00)	(\$1,408.97)
17	95%	\$23,415.60	10%	\$1,516.80	\$28,438.03	(\$24,843.00)	\$3,595.03
18	95%	\$23,489.70	10%	\$1,521.60	\$28,528.02	(\$24,843.00)	\$3,685.02
19	95%	\$23,563.80	50%	\$7,632.00	\$34,723.61	(\$24,843.00)	\$9,880.61
20	95%	\$23,637.90	50%	\$7,656.00	\$34,832.81	(\$24,843.00)	\$9,989.81
21	95%	\$23,712.00	50%	\$7,680.00	\$34,942.00	(\$24,843.00)	\$10,099.00
22	95%	\$23,786.10	50%	\$7,704.00	\$35,051.19	(\$24,843.00)	\$10,208.19
23	95%	\$23,860.20	50%	\$7,728.00	\$35,160.39	(\$24,843.00)	\$10,317.39
24	95%	\$23,934.30	50%	\$7,752.00	\$35,269.58	(\$24,843.00)	\$10,426.58
25	75%	\$18,954.00	10%	\$1,555.20	\$24,103.58	(\$25,798.50)	(\$1,694.93)
26	75%	\$19,012.50	10%	\$1,560.00	\$24,177.97	(\$25,798.50)	(\$1,620.53)
27	75%	\$19,071.00	10%	\$1,564.80	\$24,252.36	(\$25,798.50)	(\$1,546.14)
28	75%	\$19,129.50	10%	\$1,569.60	\$24,326.76	(\$25,798.50)	(\$1,471.74)
29	75%	\$19,188.00	10%	\$1,574.40	\$24,401.15	(\$25,798.50)	(\$1,397.35)
30	75%	\$19,246.50	10%	\$1,579.20	\$24,475.54	(\$25,798.50)	(\$1,322.96)
31	95%	\$24,453.00	50%	\$7,920.00	\$36,033.94	(\$25,798.50)	\$10,235.44
32	95%	\$24,527.10	50%	\$7,944.00	\$36,143.13	(\$25,798.50)	\$10,344.63
33	95%	\$24,601.20	50%	\$7,968.00	\$36,252.33	(\$25,798.50)	\$10,453.83
34	95%	\$24,675.30	50%	\$7,992.00	\$36,361.52	(\$25,798.50)	\$10,563.02
35	95%	\$24,749.40	50%	\$8,016.00	\$36,470.71	(\$25,798.50)	\$10,672.21
36	95%	\$24,823.50	50%	\$8,040.00	\$36,579.91	(\$25,798.50)	\$10,781.41
37	75%	\$19,656.00	10%	\$1,612.80	\$24,996.30	(\$26,754.00)	(\$1,757.70)
38	75%	\$19,714.50	10%	\$1,617.60	\$25,070.69	(\$26,754.00)	(\$1,683.31)
39	75%	\$19,773.00	10%	\$1,622.40	\$25,145.09	(\$26,754.00)	(\$1,608.91)
40	75%	\$19,831.50	10%	\$1,627.20	\$25,219.48	(\$26,754.00)	(\$1,534.52)
41	75%	\$19,890.00	10%	\$1,632.00	\$25,293.88	(\$26,754.00)	(\$1,460.13)
42	75%	\$19,948.50	10%	\$1,636.80	\$25,368.27	(\$26,754.00)	(\$1,385.73)
43	95%	\$25,342.20	50%	\$8,208.00	\$37,344.26	(\$26,754.00)	\$10,590.26
44	95%	\$25,416.30	50%	\$8,232.00	\$37,453.46	(\$26,754.00)	\$10,699.46
45	95%	\$25,490.40	50%	\$8,256.00	\$37,562.65	(\$26,754.00)	\$10,808.65
46	95%	\$25,564.50	50%	\$8,280.00	\$37,671.84	(\$26,754.00)	\$10,917.84
47	95%	\$25,638.60	50%	\$8,304.00	\$37,781.04	(\$26,754.00)	\$11,027.04
48	95%	\$25,712.70	50%	\$8,328.00	\$37,890.23	(\$26,754.00)	\$11,136.23
49	75%	\$20,358.00	10%	\$1,670.40	\$25,889.03	(\$27,709.50)	(\$1,820.48)
50	75%	\$20,416.50	10%	\$1,675.20	\$25,963.42	(\$27,709.50)	(\$1,746.08)
51	75%	\$20,475.00	10%	\$1,680.00	\$26,037.81	(\$27,709.50)	(\$1,671.69)
52	75%	\$20,533.50	10%	\$1,684.80	\$26,112.21	(\$27,709.50)	(\$1,597.29)
53	75%	\$20,592.00	10%	\$1,689.60	\$26,186.60	(\$27,709.50)	(\$1,522.90)
54	75%	\$20,650.50	10%	\$1,694.40	\$26,260.99	(\$27,709.50)	(\$1,448.51)
55	95%	\$26,231.40	50%	\$8,496.00	\$38,654.59	(\$27,709.50)	\$10,945.09
56	95%	\$26,305.50	50%	\$8,520.00	\$38,763.78	(\$27,709.50)	\$11,054.28
57	95%	\$26,379.60	50%	\$8,544.00	\$38,872.98	(\$27,709.50)	\$11,163.48
58	95%	\$26,453.70	50%	\$8,568.00	\$38,982.17	(\$27,709.50)	\$11,272.67
59	95%	\$26,527.80	50%	\$8,592.00	\$39,091.36	(\$27,709.50)	\$11,381.86
60	95%	\$26,601.90	50%	\$8,616.00	\$39,200.56	(\$27,709.50)	\$11,491.06

Total for 5 yrs	\$1,160,211.00	\$255,405.60	\$1,634,940.04	(\$1,426,035.00)	\$208,905.04
Annual After Yr 5	\$281,525.40	\$61,430.40	\$390,015.49	(\$332,514.00)	\$57,501.49

7. MARINA PROGRAM

7.1 Slip Number

The projected market drivers identified in the study are summarized in Table 7-1. The proposed marina at the project site is not expected to target full market saturation. Unforeseen changes in market growth may be accommodated by reducing the target slip count below full market demand. In addition, site spatial and construction considerations may limit the marina size to 40 to 60 slips.

Table 7-1: Projected Market Slip Demand

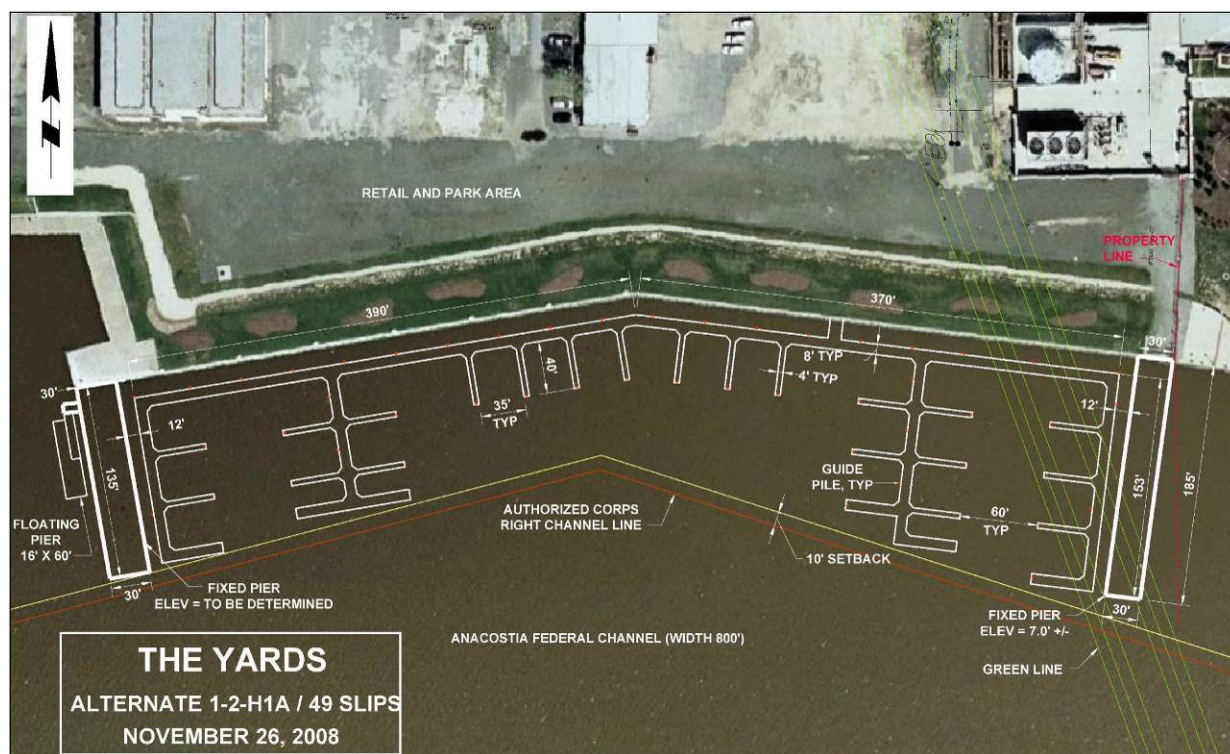
Market Driver	Slip Demand In the D.C. Market
Underserved Population	70 - 100
Population Growth	200 - 250
Upland Development	50 - 75
Transient Boaters	5 - 15
Commercial/Charter	0 - 10
Total	325 - 450

7.2 Slip Mix

Analysis indicates the demand in the D.C. market is for wet slips in the 40-foot to 60-foot range. While larger vessels may be attracted to the marina they are not highly prevalent in the D.C. market and these vessels can be accommodated through the design of the marina with side-ties at the end of docks. Key to providing flexibility in marina slips is providing sufficient power for vessels as they get larger and more amenity-laden. Table 7-2 shows the proposed slip range for the marina at The Yards and Figure 7-1 shows a concept layout.

Table 7-2: Proposed Slip Mix

Slip Size	% of Slips	# of Slips
40-49	30-40%	15-24
50-59	40-50%	20-30
60-69	10-30%	5-18
70+	5-10%	3-6

**Figure 7-1: Concept Marina Layout**

7.3 Slip Lease Rates

Slip lease rates are influenced by the marina design (size and style) and upland amenities. The location of this marina near the ballpark and the proposed retail and residential development will attract boaters to the site. Proximity to the city center, cultural and historical activities and public transportation in a newly renovated part of the city will add a premium to the slip prices when compared to other locations in the D.C. market. The new and updated amenities available at the newly constructed marina will also increase the slip lease rates. The scarcity of available slips in the 40-foot and larger range and sufficient power availability will not only attract boaters to the

marina but will allow a premium to be charged for lease rates. The market is expected to support slip rates at the proposed marina on the order of \$2-\$3 per foot per day for transients, \$9-\$15 per foot per month for monthly leases and \$9-\$13 per foot per month for annual leases.

7.4 Strengths, Weaknesses, Opportunities and Threats

The following section outlines the strengths, weaknesses, opportunities, and threats (SWOT) to the proposed marina project.

Strengths

Existing Underserved Boating Market
Especially Larger (>40 ft) slips
Transient Draw
Downtown Location
Existing Attractions and Events
Nationals' Stadium
Proposed Upland Improvements
Residential Units
Location Relative to DCA
Potential Ferry/Water Taxi Business

Weaknesses

Upland Community in Early Stages of Re-
Development
Limited Parking
Exposure to Waves
River Currents/Debris
Pollution
Siltation

Opportunities

Transient Market
Hotel
Shops
Events
High End Services
Concierge
Synergy with Upland
Strong Demand for Live-aboard Slips

Threats

Instability in Fuel Costs leading to
Fluctuations in Boating Activities
Required Mitigation for Waterside Impacts
Limited Space due to Federal Channel

8. REFERENCES

Ross, Neil W. 34th National Course & Conference Docks & Marinas 2008

Kozel, Scott M. “Woodrow Wilson Bridge (I-495 and I-95).” Roads to the Future. November 2008 <http://www.roadstothefuture.com/Woodrow_Wilson_Bridge.html>

Metropolitan Police Department. Crime and Activity Statistics. November 2008. <<http://mpdc.dc.gov/mpdc/site/default.asp>>

Tobiasson, Bruce O. and Ronald C. Kollmeyer. 2000. Marinas and Small Craft Harbors. Van Nostrand Reinhold, NY.

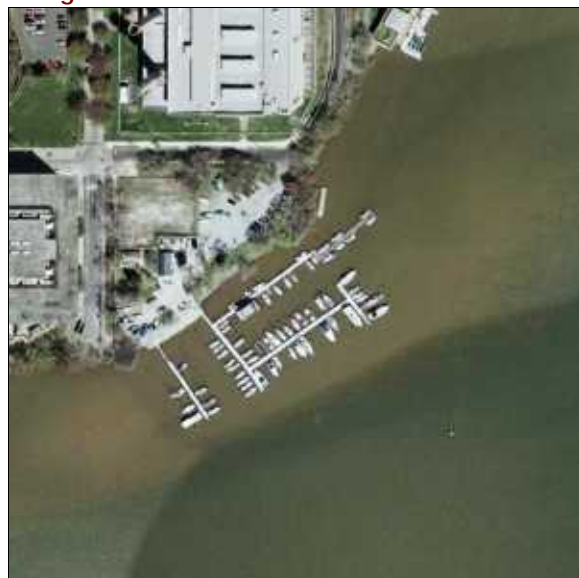
Turner, Margery Austin and Christopher Snow. “Leading Indicators of Gentrification in D.C. Neighborhoods.” Urban Institute. June 14, 2001. November 2008. <<http://www.urban.org/Publications/900461.html>>

APPENDIX A: MARINA SURVEY DATA

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Anacostia Marina**Address:** 1900 M St SE**Phone** (202) 546-4674 **Fax**Washington, DC 20003**Web Page Link:****Latitude:** 38.878328**Longitude:** 76.976031**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWetDry**Slips** 75**Rate /Day/Foot** \$0.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 0**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y / use**Security** Y**Guard** N **Video** N**Dockside Amenities:****Potable Water** Y /gal**Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** N**Ice** N**Comments:**

Marina Closed for Enviromental Hazards, but expected to re-open.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Buzzard Point Marina**Address:** 2158 Half St SW**Phone** (202) 488-8400 **Fax**Washington, DC 20024**Web Page Link:****Latitude:** 38.86401**Longitude:** 77.011387**Contact Person:****Image:****Slips:** **Dock Style** Fixed**Dock Material** WoodWetDry**Slips** 90**Rate /Day/Foot** \$1.00 \$0.00**Rate /Month/Foot** \$7.25 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 0**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y / use**Security** N**Guard** N **Video** N**Dockside Amenities:****Potable Water** Y /gal**Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** N**Ice** N**Comments:****Events/Local Notes:**

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Capital Yacht Club**Address:** 1000 Water St SW**Phone** (202) 488-8110 **Fax**Washington, DC 20024**Web Page Link:****Latitude:** 38.880506**Longitude:** 77.026844www.capitalyachtclub.com**Contact Person:****Image:****Slips:** **Dock Style** Floating w/1 fixed**Dock Material** Aluminum truss wWet Dry**Slips** 79**Rate /Day/Foot** \$3.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0Min Max**Slip Length** 0 200**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y / use**Security** Y**Guard** N **Video** N**Dockside Amenities:****Potable Water** Y /gal**Electric** YMetered Flat Rateper KWH Daily Monthly**30 Amp:** \$0.25**50 Amp:** \$0.25**100 Amp:** \$0.25**Telephone** Y**Internet Access** Y**Television** Y**Landside Amenities:****Restaurant** Y**Bar** Y**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** Y**Showers** Y**Ice** N**Comments:**

Members-only club. Liveaboard are allowed.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Columbia Island Marina**Address:** 1 George Washington Memorial Parkway**Phone** (202) 347-0173 **Fax**Washington, D.C.**Web Page Link:****Latitude:** 38.874894**Longitude:** 77.049058www.columbiaisland.com**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWetDry**Slips** 380**Rate /Day/Foot** \$1.50 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 20 50**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** Y **Diesel** N**High Speed** N N**Sanitary/Pump-Out** Y \$5.00 / use**Security****Guard** **Video****Landside Amenities:****Restaurant** Y**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** Y**Ice** N**Dockside Amenities:****Potable Water** Y /gal**Electric** Y**Metered****Flat Rate****per KWH****Daily****Monthly****30 Amp:** \$0.00 \$3.00**50 Amp:** \$0.00 \$5.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Comments:****Events/Local Notes:**

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** District Yacht Club**Address:** 1409 Water St SE**Phone** (202) 543-9788 **Fax**Washington, DC 20003**Web Page Link:****Latitude:** 38.875425**Longitude:** 76.985612**Contact Person:****Image:****Slips:** **Dock Style** Floating some cov**Dock Material** WoodWetDry**Slips** 43 0**Rate /Day/Foot** \$0.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 0 55**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y / use**Security** Y**Guard** N **Video** N**Dockside Amenities:****Potable Water** Y /gal**Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** N**Ice** N**Comments:**

A members-only club. Initial dues are \$1,000 with a monthly fee of \$120 per slip regardless of slip/vessel size and 2 hours of maintenance work on the grounds. National Park Service currently owns the land but is in the process of transferring it to the District. Plans to upgrade to 67 slips and two 30 amp outlets at each slip. Need more 50-55 foot slips. D.C. Clean Marina

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Eastern Power Boat Club**Address:** 1301 Water St SE**Phone** (202) 544-9810 **Fax**Washington, DC 20003**Web Page Link:****Latitude:** 38.874819 **Longitude:** 76.986762**Contact Person:****Image:****Slips:** **Dock Style** Fixed and Floatin**Dock Material** WoodWet Dry**Slips** 30 0**Rate /Day/Foot** \$0.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0Min Max**Slip Length** 0**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y **/ use****Security** N**Guard** N **Video** N**Dockside Amenities:****Potable Water** Y /gal**Electric** YMetered Flat Rateper KWH Daily Monthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** N**Ice** N**Comments:**

A members-only club with a clubhouse and picnic area. Facilities are older. There is a boat ramp but it is blocked by wood decking connecting the docks-the deck piece appears to be removable.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Gangplank Marina**Address:** 600 Water Street SW**Phone** (202) 554-5000 **Fax** (202) 554-2740Washington, DC 20024**Web Page Link:****Latitude:** 38.876708**Longitude:** 77.022102**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWetDry**Slips** 310 0**Rate /Day/Foot** \$1.50 \$0.00**Rate /Month/Foot** \$17.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 125**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y \$12.00 / use**Security** Y**Guard** Y **Video****Dockside Amenities:****Potable Water** Y /gal**Electric** Y**Metered****Flat Rate****per KWH****Daily****Monthly****30 Amp:** \$0.00 \$5.00**50 Amp:** \$0.00 \$10.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** Y**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** Y**Showers** Y**Ice** N**Comments:**

Approximately 100 slips have liveaboards and no new applications being taken only transfers allowed. City-owned marina with a private management company. Bubbler for the dock during the winter. Most occupants are recreational or government contractors. Have been turning away large transients. May stay aboard vessel for 4 nights a week without being considered a liveaboard.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** James Creek Marina**Address:** 200 V St SW**Phone** (202) 554-8844 **Fax**Washington, DC 20024**Web Page Link:**
www.jamescreek.com**Latitude:** 38.864006 **Longitude:** 77.014489**Contact Person:****Image:**

Slips:	Dock Style	<u>Floating</u>
	Dock Material	<u>Wood</u>
		<u>Wet</u> <u>Dry</u>
	Slips	300 0
	Rate /Day/Foot	\$1.25 \$0.00
	Rate /Month/Foot	\$10.25 \$0.00
	Busy Season	
	Peak Occupancy	
	Off Season	
	Off Peak Occupancy	
	Transient Berth	0
		<u>Min</u> <u>Max</u>
	Slip Length	26 87
	Approach Dept	0 0

Waterside Amenities:**Fuel**

Gasoline	Y	Diesel	Y
High Speed	N		N
Sanitary/Pump-Out		Y	
Security		Y	
Guard	N	Video	N

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	

/ use

	<u>Metered</u>	<u>Flat Rate</u>	
	<u>per KWH</u>	<u>Daily</u>	<u>Monthly</u>
30 Amp:	\$0.00	\$3.00	\$10-\$60
50 Amp:	\$0.00	\$5.00	\$10-\$60
100 Amp:	\$0.00		

Landside Amenities:

Restaurant	N
Bar	N
Shopping	N
Water Sports	N
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	N
Showers	Y
Ice	Y

Comments:

DC Clean Marina. National Park Service owned, privately managed. Mostly 40-45 foot LOA. Approx. \$0.60/gal markup on fuel.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Seafarers Yacht Club**Address:** 1950 M St SE**Phone** (202) 544-7333 **Fax**Washington, DC 20003**Web Page Link:****Latitude:** 38.879115 **Longitude:** 76.974027**Contact Person:****Image:**

Slips:	Dock Style	<u>Floating</u>
	Dock Material	<u>Wood</u>
		<u>Wet</u> <u>Dry</u>
	Slips	66
	Rate /Day/Foot	\$0.00 \$0.00
	Rate /Month/Foot	\$0.00 \$0.00
	Busy Season	
	Peak Occupancy	
	Off Season	
	Off Peak Occupancy	
	Transient Berth	0
		<u>Min</u> <u>Max</u>
	Slip Length	0 50
	Approach Dept	0 0

Waterside Amenities:**Fuel**

Gasoline	N	Diesel	N
High Speed	N		N
Sanitary/Pump-Out		Y	
Security		Y	
Guard	N	Video	N

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	

Landside Amenities:

Restaurant	N
Bar	N
Shopping	N
Water Sports	N
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	N
Showers	N
Ice	N

Comments:

Older docks that are barely floating. There is a rundown bathroom on site.

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	
50 Amp:	\$0.00	
100 Amp:	\$0.00	
Telephone		N
Internet Access		N
Television		N

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Washington Marina Company**Address:** 1300 Maine Ave SW**Phone** (202) 554-0222 **Fax**Washington, DC 20024**Web Page Link:****Latitude:** 38.882219**Longitude:** 77.029793www.washingtonmarina.com**Contact Person:****Image:**

Slips:	Dock Style	<u>Floating</u>
	Dock Material	<u>Composite</u>
		<u>Wet</u> <u>Dry</u>
	Slips	111
	Rate /Day/Foot	\$2.50 \$0.00
	Rate /Month/Foot	\$9.00 \$0.00
	Busy Season	
	Peak Occupancy	
	Off Season	
	Off Peak Occupancy	
	Transient Berth	0
		<u>Min</u> <u>Max</u>
	Slip Length	20 100
	Approach Dept	0 0

Waterside Amenities:**Fuel**

Gasoline	N	Diesel	N
High Speed	N		N
Sanitary/Pump-Out	Y		/ use
Security	Y		
Guard		Video	

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	

Landside Amenities:

Restaurant	N
Bar	N
Shopping	N
Water Sports	N
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	N
Showers	N
Ice	N

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	
50 Amp:	\$0.00	
100 Amp:	\$0.00	
Telephone		N
Internet Access		N
Television		N

Comments:

Marina created to fulfill dictate by FDR for a first-class marina in DC. Parking is limited. Slips available the past 2 years in the 20-foot range with a waiting list for 30-foot and longer. Most slip holders use the boat for entertaining after work and on weekends or go cruising or to the bars in Georgetown. In-slip pumpout. Supply store that ships globally. Transient boaters from NY; also one from Australia. Home to Capital Yacht Charters.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** DC**Marina Name** Washington Yacht Club**Address:** 1500 M St SE**Phone** (202) 543-2027 **Fax**Washington, DC 20003**Web Page Link:****Latitude:** 38.876443**Longitude:** 76.983322**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWetDry**Slips** 40 0**Rate /Day/Foot** \$0.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 0**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y / use**Security****Guard** **Video****Dockside Amenities:****Potable Water** Y /gal**Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** N**Ice** N**Comments:****Events/Local Notes:**

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Alexandria City Marina**Address:** 0 Cameron Street**Phone** (703) 838-4265 **Fax**Alexandria, VA 22314**Web Page Link:****Latitude:** 38.805241**Longitude:** 77.038963**Contact Person:****Image:****Slips:****Dock Style**Fixed**Dock Material**Wood with CompWetDry**Slips**

60

0

Rate /Day/Foot

\$3.00

\$0.00

Rate /Month/Foot

\$8.25

\$0.00

Busy Season**Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth**

20

MinMax**Slip Length**

0

210

Approach Dept

0

20

Waterside Amenities:**Fuel****Gasoline** N**Diesel** N**High Speed** N

N

Sanitary/Pump-Out N

/ use

Security N

N

Guard N**Video** Y

Y

Dockside Amenities:**Potable Water** Y

/gal

Electric YMeteredFlat Rateper KWHDailyMonthly**30 Amp:**

\$0.00

\$3.00

50 Amp:

\$0.00

\$6.00

100 Amp:

\$0.00

\$12.00

Telephone

N

Internet Access

N

Television

N

Landside Amenities:**Restaurant** Y

Y

Bar Y

Y

Shopping Y

Y

Water Sports N

N

Hotel N

N

Pool N

N

Crews Quarters N

N

Laundry Facilities N

N

Showers Y

Y

Ice Y

Y

Comments:

No Liveaboards, some overnight transient allowed. The city owns the marina so only city residents are allowed annual leases. Currently 40 slips are leased but may move 10 more from transient to annual during the down economy. Wait list for an annual lease has 60-70 vessels which is approx. a 5 year wait. Many local transients come to visit the bars and other transients come from NY & FL to visit the area. One t-head has 100 amp power and 3 slips have 50 amp, all others have 30 amp.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Belle Haven Marina**Address:** 1201 Belle Haven Marina Road**Phone** (703) 768-0018 **Fax**Alexandria, VA 22307**Web Page Link:**
www.saildc.com**Latitude:** 38.776681 **Longitude:** 77.048325**Contact Person:****Image:**

Slips:	Dock Style	<u>Fixed</u>	
	Dock Material	<u>Wood</u>	
		<u>Wet</u>	<u>Dry</u>
	Slips	130	
	Rate /Day/Foot	\$0.00	\$0.00
	Rate /Month/Foot	\$8.25	\$6.00
	Busy Season		
	Peak Occupancy		
	Off Season		
	Off Peak Occupancy		
	Transient Berth	0	
		<u>Min</u>	<u>Max</u>
	Slip Length	0	50
	Approach Dept	0	0

Waterside Amenities:**Fuel**

Gasoline	N	Diesel	N	
High Speed	N		N	
Sanitary/Pump-Out		Y	\$5.00	/ use
Security		N		
Guard	N	Video	N	

Dockside Amenities:

Potable Water	Y	/gal
Electric	N	

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>

30 Amp:	\$0.00
50 Amp:	\$0.00
100 Amp:	\$0.00

Telephone	N
Internet Access	N
Television	N

Landside Amenities:

Restaurant	N
Bar	N
Shopping	N
Water Sports	Y
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	N
Showers	N
Ice	Y

Comments:

extensive wait list according to website

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Belmont Bay Marina**Address:** 570 Harbor Side St**Phone** (703) 490-5088 **Fax** (703) 490-5188Woodbridge, VA 22191**Web Page Link:**
www.belmontbay.com**Latitude:** 38.655276 **Longitude:** 77.233301**Contact Person:****Image:**

Slips:	Dock Style	<u>Floating</u>
	Dock Material	<u>Wood</u>
		<u>Wet</u> <u>Dry</u>
	Slips	158 0
	Rate /Day/Foot	\$1.50 \$0.00
	Rate /Month/Foot	\$16.00 \$0.00
	Busy Season	
	Peak Occupancy	
	Off Season	
	Off Peak Occupancy	
	Transient Berth	0
		<u>Min</u> <u>Max</u>
	Slip Length	0 50
	Approach Dept	0 0

Waterside Amenities:**Fuel**

Gasoline	Y	Diesel	Y
High Speed	N		N
Sanitary/Pump-Out	Y	\$5.00	/ use
Security	Y		
Guard		Video	

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	\$3
50 Amp:	\$0.00	\$5
100 Amp:	\$0.00	

Landside Amenities:

Restaurant	N
Bar	N
Shopping	N
Water Sports	N
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	Y
Showers	Y
Ice	Y

Comments:

Pumpout is free for slip takers. Located in a residential community with a public golf course.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Captain John S. Beach Marina**Address:** 10729 Old Colchester Rd**Phone** (703) 339-6726 **Fax**Lorton, VA 22079**Web Page Link:****Latitude:** 38.666228**Longitude:** 77.238035**Contact Person:****Image:****Slips:****Dock Style**Floating**Dock Material**Aluminum truss wWetDry**Slips**

84

Rate /Day/Foot

\$0.00

\$0.00

Rate /Month/Foot

\$0.00

\$0.00

Busy Season**Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth**

0

MinMax**Slip Length**

0

Approach Dept

0

0

Waterside Amenities:**Fuel****Gasoline**

Y

Diesel**High Speed**

N

N

Sanitary/Pump-Out

Y

\$15.00

/ use**Security**

N

Guard

N

Video

N

Dockside Amenities:**Potable Water**

Y

/gal**Electric**

Y

MeteredFlat Rateper KWHDailyMonthly**30 Amp:**

\$0.00

50 Amp:

\$0.00

100 Amp:

\$0.00

Telephone

N

Internet Access

N

Television

N

Landside Amenities:**Restaurant**

N

Bar

N

Shopping

N

Water Sports

N

Hotel

N

Pool

N

Crews Quarters

N

Laundry Facilities

N

Showers

N

Ice

Y

Comments:

Electric is metered.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** E-Z Cruz**Address:** 16245 Neabsco Rd**Phone** (703) 670-8115 **Fax**Woodbridge, VA 22191**Web Page Link:****Latitude:** 38.59956**Longitude:** 77.257892**Contact Person:****Image:****Slips:****Dock Style**Fixed**Dock Material**WoodWetDry**Slips**

187

Rate /Day/Foot

\$0.00

\$0.00

Rate /Month/Foot

\$8.33

\$0.00

Busy Season**Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth**

0

MinMax**Slip Length**

0

Approach Dept

0

0

Waterside Amenities:**Fuel****Gasoline** Y**Diesel** N

N

High Speed N

N

Sanitary/Pump-Out Y

/ use

Security**Guard****Video****Dockside Amenities:****Potable Water** Y

/gal

Electric YMeteredFlat Rateper KWHDailyMonthly**30 Amp:**

\$0.00

50 Amp:

\$0.00

100 Amp:

\$0.00

Telephone

N

Internet Access

N

Television

N

Landside Amenities:**Restaurant**

N

Bar

N

Shopping

N

Water Sports

N

Hotel

N

Pool

N

Crews Quarters

N

Laundry Facilities**Showers****Ice**

Y

Comments:

service and repair yard

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Fort Washington Marina**Address:** 13600 King Charles Ter**Phone** (301) 292-7700 **Fax**Fort Washington, MD 20744**Web Page Link:****Latitude:** 38.702765 **Longitude:** 77.025236**Contact Person:****Image:****Slips:** **Dock Style** Fixed & Floating
Dock Material Wood & ConcreteWet Dry**Slips** 300**Rate /Day/Foot** \$1.50 \$0.00**Rate /Month/Foot** \$10.79 \$61.90**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0Min Max**Slip Length** 0 50**Approach Dept** 6**Waterside Amenities:****Fuel****Gasoline** Y **Diesel** Y**High Speed** N N**Sanitary/Pump-Out** Y / use**Security** Y**Guard** **Video****Dockside Amenities:****Potable Water** Y /gal**Electric** YMetered Flat Rateper KWH Daily Monthly**30 Amp:** \$0.00 \$5.00**50 Amp:** \$0.00 \$7.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** Y**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** Y**Showers** Y**Ice** N**Comments:**

Two piers of newer, floating concrete docks, floating wood docks, new fixed wood docks with lifts. Double boat ramp. Shallow water restrictions. Smaller sailboats. Most popular is 30-35 foot LOA.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Hampton's Landing Marina**Address:** 16205 Neabsco Rd**Phone** (703) 221-4915 **Fax**Woodbridge, VA 22191**Web Page Link:****Latitude:** 38.600891**Longitude:** 77.261425www.hamptonslandingmarina.com**Contact Person:****Image:****Slips:** **Dock Style** Fixed**Dock Material** WoodWetDry**Slips** 123 0**Rate /Day/Foot** \$1.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 0 50**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** Y **Diesel** Y**High Speed** N N**Sanitary/Pump-Out** Y \$5.00 / use**Security** N**Guard** N **Video** N**Dockside Amenities:****Potable Water** Y /gal**Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00 \$5**50 Amp:** \$0.00 \$5**100 Amp:** \$0.00**Telephone** Y**Internet Access** N**Television** Y**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** Y**Ice** Y**Comments:**

Full service marina and repair yard. Some covered slips.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** National Harbor**Address:** 163 Waterfront Street**Phone** (301) 749-1582 **Fax**National Harbor, MD 20745**Web Page Link:****Latitude:** 38.782513 **Longitude:** 77.018326**Contact Person:****Image:****Slips:** **Dock Style** Fixed & Floating
Dock Material Concrete & Wood

	<u>Wet</u>	<u>Dry</u>
Slips	64	0
Rate /Day/Foot	\$2.25	\$0.00
Rate /Month/Foot	\$0.00	\$0.00

Busy Season**Peak Occupancy****Off Season****Off Peak Occupancy**

Transient Berth	0	
	<u>Min</u>	<u>Max</u>

Slip Length 0**Approach Dept** 0 0**Waterside Amenities:****Fuel**

Gasoline	Y	Diesel	Y	
High Speed	N		N	
Sanitary/Pump-Out		Y		/ use
Security		Y		
Guard	Y	Video	Y	

Dockside Amenities:**Potable Water** Y /gal**Electric** Y

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	
50 Amp:	\$0.00	
100 Amp:	\$0.00	

Landside Amenities:**Restaurant** Y**Bar** Y**Shopping** Y**Water Sports** N**Hotel** Y**Pool** Y**Crews Quarters** N**Laundry Facilities** Y**Showers** Y**Ice** Y**Comments:**

All inclusive marina with upland restaurants and lodging. Water taxi to Alexandria. Larger slips but smaller vessels occupy the slips.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Occoquan Harbour Marina**Address:** 13180 Marina Way**Phone** (703) 494-3600 **Fax** (703) 494-3096Woodbridge, VA 22191**Web Page Link:****Latitude:** 38.669599**Longitude:** 77.243166www.occoquanharbourmarina.com**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWetDry**Slips** 199**Rate /Day/Foot** \$1.50 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 30 70**Approach Dept** 8 0**Waterside Amenities:****Fuel****Gasoline** Y **Diesel** Y**High Speed** N **N****Sanitary/Pump-Out** Y **/ use****Security****Guard** **Video****Dockside Amenities:****Potable Water** Y **/gal****Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** Y**Television** Y**Landside Amenities:****Restaurant** Y**Bar** Y**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities****Showers** Y**Ice** Y**Comments:**

All slips are annually leased. Lift slips available for vessels up to 30,000 lbs and 48 feet LOA. Predominant vessel size is 30-45; remodeled 2 years ago and replaced 20-foot slips with 40-45 foot slips. Liveboards are not allowed (1 exception is an FBI instructor). Not as many 45-foot vessels as expected due to the economy-either didn't want to be so far from the Bay or didn't want to make the trip from FL.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Old Dominion Boat Club**Address:** One King St**Phone** (703) 836-1900 **Fax**Alexandria, VA 22314**Web Page Link:****Latitude:** 38.804722**Longitude:** 77.046667www.olddominionboatclub.com**Contact Person:****Image:**

Slips:	Dock Style	<u>Fixed</u>
	Dock Material	<u>Wood</u>
		<u>Wet</u> <u>Dry</u>
	Slips	53
	Rate /Day/Foot	\$1.00 \$0.00
	Rate /Month/Foot	\$0.00 \$0.00
	Busy Season	
	Peak Occupancy	
	Off Season	
	Off Peak Occupancy	
	Transient Berth	0
		<u>Min</u> <u>Max</u>
	Slip Length	0
	Approach Dept	0 0

Waterside Amenities:**Fuel**

Gasoline	N	Diesel	N
High Speed	N		N
Sanitary/Pump-Out	Y		/ use
Security			
Guard		Video	

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	

Landside Amenities:

Restaurant	Y
Bar	Y
Shopping	N
Water Sports	N
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	
Showers	
Ice	Y

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	
50 Amp:	\$0.00	
100 Amp:	\$0.00	

Telephone
Internet Access
Television

Comments:

Membership required, some transients allowed

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Prince William Marina**Address:** 12849 Gordon Blvd**Phone** (703) 494-6611 **Fax** (703) 494-9906Woodbridge, VA 22192**Web Page Link:**
www.pwmarina.com**Latitude:** 38.676687 **Longitude:** 77.252741**Contact Person:****Image:**

Slips: **Dock Style** Floating
Dock Material Aluminum
Wet **Dry**
Slips 350 250
Rate /Day/Foot \$0.00 \$0.00
Rate /Month/Foot \$0.00 \$0.00
Busy Season
Peak Occupancy
Off Season
Off Peak Occupancy
Transient Berth 0
Min **Max**
Slip Length 0 70
Approach Dept 0 0

Waterside Amenities:**Fuel**

Gasoline	Y	Diesel	Y
High Speed	N		N
Sanitary/Pump-Out	Y	/ use	
Security	Y		
Guard		Video	

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	

Landside Amenities:

Restaurant	Y
Bar	N
Shopping	N
Water Sports	N
Hotel	N
Pool	Y
Crews Quarters	N
Laundry Facilities	
Showers	
Ice	Y

	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	
50 Amp:	\$0.00	
100 Amp:	\$0.00	
Telephone		N
Internet Access		N
Television		N

Comments:

Sea Ray boat dealer. Only allowed a slip if the boat is purchased from them. Average boat size is 27-28 footer. Move 65 boats in and out of the the boat barn in a day. 700 car parking spaces and need more. 3-5% rate raise every 1-2 years. Playground, tennis courts, grill & picnic area. Active boater marina no one weekend per month customers.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Tantallon Marina**Address:** 900 Swan Creek Rd**Phone** (888) 735-5343 **Fax**Fort Washington, MD 20744**Web Page Link:****Latitude:** 38.723611**Longitude:** 77.02www.tantallonmarina.com**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWetDry**Slips** 106 0**Rate /Day/Foot** \$0.00 \$0.00**Rate /Month/Foot** \$0.00 \$0.00**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0MinMax**Slip Length** 0 60**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** N**Security** Y**Guard** N **Video** Y**/ use****Dockside Amenities:****Potable Water** Y /gal**Electric** YMeteredFlat Rateper KWHDailyMonthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** N**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** N**Ice** N**Comments:**

Fuel dock 1 mile away at Ft. Washington Marina; 60A/110V electric available. Dock gate with no lock. Liveaboards allowed, mailboxes. Older docks, rundown.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** The Pilot House Marina**Address:** 16216 Neabsco Rd**Phone** (703) 670-6900 **Fax**Woodbridge, VA 22191**Web Page Link:****Latitude:** 38.600318 **Longitude:** 77.260066www.thepilothouse.com**Contact Person:****Image:**

Slips:	Dock Style	<u>Fixed</u>
	Dock Material	<u>Wood</u>
		<u>Wet</u> <u>Dry</u>
	Slips	250
	Rate /Day/Foot	\$0.00 \$0.00
	Rate /Month/Foot	\$0.00 \$0.00
	Busy Season	
	Peak Occupancy	
	Off Season	
	Off Peak Occupancy	
	Transient Berth	0
		<u>Min</u> <u>Max</u>
	Slip Length	0 40
	Approach Dept	0 0

Waterside Amenities:**Fuel**

Gasoline	Y	Diesel	N
High Speed	N		N
Sanitary/Pump-Out	Y	\$5.00	/ use
Security	Y		
Guard	Video	Y	

Dockside Amenities:

Potable Water	Y	/gal
Electric	Y	
	<u>Metered</u>	<u>Flat Rate</u>
	<u>per KWH</u>	<u>Daily</u> <u>Monthly</u>
30 Amp:	\$0.00	
50 Amp:	\$0.00	
100 Amp:	\$0.00	
Telephone		N
Internet Access		N
Television		N

Landside Amenities:

Restaurant	N
Bar	N
Shopping	N
Water Sports	N
Hotel	N
Pool	N
Crews Quarters	N
Laundry Facilities	N
Showers	N
Ice	Y

Comments:

No liveaboards. 100 lift slips. Vessels pulled out every winter. No vacancy the past 5-years, this year 30-40% vacancy due to economy. 5-year recovery expected. Soft bottom that is dredged every year with power blowing in the winter. Sailboats only up to 23 feet due to height and draft. Adjacent bridge has 30-foot clearance. 28-32 foot LOA most popular slip size.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Tyme n' Tyde Marina**Address:** 14603 Featherstone Rd**Phone** (703) 491-5116 **Fax** (703) 491-4048Woodbridge, VA 22191**Web Page Link:**
www.tymentyde.com**Latitude:** 38.635365 **Longitude:** 77.246594**Contact Person:****Image:**

Slips: **Dock Style** Floating
Dock Material Wood
Wet **Dry**
Slips 29 420
Rate /Day/Foot \$0.00 \$0.00
Rate /Month/Foot \$0.00 \$13.69
Busy Season
Peak Occupancy
Off Season
Off Peak Occupancy
Transient Berth 0
Min **Max**
Slip Length 0
Approach Dept 0 0

Waterside Amenities:**Fuel**

Gasoline Y **Diesel** N
High Speed N N
Sanitary/Pump-Out Y \$5.00 / use

Security**Guard** **Video****Dockside Amenities:**

Potable Water Y /gal
Electric Y

Metered **Flat Rate**
per KWH **Daily** **Monthly**

30 Amp: \$0.00
50 Amp: \$0.00
100 Amp: \$0.00

Telephone N
Internet Access N
Television N

Landside Amenities:

Restaurant N
Bar N
Shopping N
Water Sports N
Hotel N
Pool N
Crews Quarters N
Laundry Facilities N
Showers Y
Ice

Comments:

Primarily a dry stack facility. Availability for 18-21 foot boats. 26-foot and longer vessels used to have a 2 year wait list but no longer have much of a wait time. Facility is still pretty full and the week of 10/20 was the first boat repo in 5 years.

Events/Local Notes:

MARKET Washington, D.C. Metro Area**LOCATION** VA & MD**Marina Name** Washington Sailing Marina**Address:** 1 Marina Dr**Phone** (703) 548-9027 **Fax**Alexandria, VA 22314**Web Page Link:****Latitude:** 38.832887**Longitude:** 77.042364www.washingtonsailingmarina.com**Contact Person:****Image:****Slips:** **Dock Style** Floating**Dock Material** WoodWet Dry**Slips** 175**Rate /Day/Foot** \$0.00**Rate /Month/Foot** \$8.98 \$5.15**Busy Season****Peak Occupancy****Off Season****Off Peak Occupancy****Transient Berth** 0Min Max**Slip Length** 0 35**Approach Dept** 0 0**Waterside Amenities:****Fuel****Gasoline** N **Diesel** N**High Speed** N**Sanitary/Pump-Out** Y / use**Security** Y**Guard** **Video****Dockside Amenities:****Potable Water** Y /gal**Electric** YMetered Flat Rateper KWH Daily Monthly**30 Amp:** \$0.00**50 Amp:** \$0.00**100 Amp:** \$0.00**Telephone** N**Internet Access** N**Television** N**Landside Amenities:****Restaurant** Y**Bar** N**Shopping** N**Water Sports** N**Hotel** N**Pool** N**Crews Quarters** N**Laundry Facilities** N**Showers** Y**Ice** N**Comments:**

No Liveaboards.

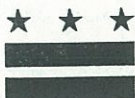
Events/Local Notes:



**2700 Lighthouse Point East – Suite 501
Baltimore, MD 21224
(410) 563-7300**

Appendix B. Agency Response Letters

GOVERNMENT OF THE DISTRICT OF COLUMBIA
STATE HISTORIC PRESERVATION OFFICER



February 19, 2009

Mr. AP Das
Chief, Environmental Division
Department of the Navy
Naval Facilities Engineering Command Washington
Public Works Department Washington
1013 O Street, SE, Building 166, Suite 100N
Washington Navy Yard, DC 20374

RE: Proposed Demolition of Piers 3 and 4, Washington Navy Yard

Dear Mr. Das:

Thank you for contacting the DC State Historic Preservation Office (DC SHPO) regarding the above-referenced undertaking and for providing an opportunity to visit the Washington Navy Yard (WNY) on January 29th. Based upon the results of the site visit and our review of relevant project information, we are writing in accordance with Section 106 of the National Historic Preservation Act to provide our initial comments regarding effects on historic properties.

The DC SHPO considers Piers 3 and 4 to be contributing elements of the WNY Historic District because the piers played an important role in the industrial history of the WNY and because they were constructed in 1942 - a year that falls within the WNY's period of significance (1799-1961). As indicated in our November 21, 2008 email correspondence with Mr. James Dolph, we concur with the Navy's determination that demolition of the piers would meet the criteria of adverse effect found at 36 CFR 800.5(a)(1) and constitute an "adverse effect" on historic properties.

When an adverse effect is found, 36 CFR 800.6(a) requires the responsible federal agency to consult with the SHPO and other consulting parties to "...develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects." We appreciate that the Navy has proposed to undertake Historic American Engineering Record (HAER) recordation of the piers but mitigation measures such as these should only be identified *after* alternatives that could avoid the adverse effect have been developed and evaluated.

In order to make informed decisions about potential alternatives, the Navy should prepare cost estimates that compare rehabilitation and demolition costs. Demolition estimates should incorporate expenses associated with any environmental review procedures/environmental remediation measures that might be required as a result of disturbing contaminated soil beneath the Anacostia River during the razing process. We request an opportunity to review and comment on these cost estimates as they are developed and we would also appreciate an opportunity to review the 2008 conditions assessments referenced in your submittal. We look forward to consulting further with the Navy to evaluate the feasibility of various alternatives to demolition once they have been identified.

To assist the Navy in developing a full range of alternatives, the DC SHPO recently solicited unofficial input from other DC agencies and noted informal comments received from the WNY's surrounding business community. All of the feedback strongly supported retention of the piers as a component of the Anacostia Riverwalk Trail or related recreational purposes. Some of the options that the Navy should consider to meet its Section 106 responsibilities are summarized on the reverse side of this letter.

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JIM GRAHAM
COUNCILMEMBER, WARD ONE
COUNCIL OF THE DISTRICT OF COLUMBIA
WASHINGTON, D.C. 20004



1350 Pennsylvania Avenue, N.W.
Suite 105
Washington, D.C. 20004

202-724-8181
202-724-8109 fax

jgraham@dccouncil.us
jim@grahamwone.com
www.grahamwone.com

July 28, 2009

Chairperson
Committee on
Public Works and Transportation

Chairman
Board of Directors, Washington
Metropolitan Area Transit Authority

Sharon J. Banks
Acting Regional Administrator
U.S. General Services Administration
301 7th Street, SW
Washington, DC 20407-0001

Dear Ms. Banks,

Thank you for your letter announcing the U.S. General Services Administration (GSA), in coordination with Forest City Washington, Inc. (FCW), is working on developing an Environmental Assessment (EA) of in-water development at the Yards in the Near Southeast neighborhood along the Anacostia River in Washington, DC.

As this project will take place in Ward Eight and does not affect any of my neighborhood areas in Ward, I am sharing your correspondence with Councilmember Marion Barry, Councilmember of Ward Eight.

I am also sharing your correspondence with Councilmember Mary Cheh, Chair of the Committee on Government Operations and the Environment.

Sincerely,

Enclosure

JG/jl

Cc

Marion Barry
Mary Cheh

2009 AUG -6 AM 11:44
GSA WASH DC



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GOVERNMENT OF THE DISTRICT OF COLUMBIA
STATE HISTORIC PRESERVATION OFFICER



August 3, 2009

Ms. Pat Daniels
Senior Project Manager
U.S. General Services Administration
301 7th Street, SW, Room 2021
Washington, DC 20407

RE: Proposed Environmental Assessment (EA) for In-Water Development and Marina Archaeology at the Southeast Federal Center (The Yards)

Dear Ms. Daniels:

Thank you for contacting the DC State Historic Preservation Office (SHPO) regarding the above-referenced matters. We have reviewed the information in accordance with Section 106 of the National Historic Preservation Act (NHPA) and the 2007 Southeast Federal Center Programmatic Agreement (PA) and are writing to provide our initial comments regarding effects on historic properties. We are also providing these comments in accordance with the National Environmental Policy Act (NEPA) to assist the General Services Administration (GSA) in coordinating its review processes.

We understand that GSA, in coordination with Forest City Washington Inc. (FCW), is proposing to develop a recreational marina and two public piers that will accommodate a water taxi operation on the southern boundary of the SEFC along the Anacostia River. We look forward to reviewing the EA when it becomes available and to providing comments regarding any potential effects on historic properties. However, we concur with GSA's determination that there is little potential for archaeological resources to be impacted by the development of the proposed marina and piers. We also agree that any unanticipated discovery of such resources should be treated in accordance with applicable sections of the PA.

With regard to the proposed piers, we wish to inform GSA that we are currently consulting with the U.S. Navy regarding disposition of the two historic piers that are located immediately adjacent to the proposed marina site. The attached letter summarizes our initial comments to the Navy. Although no decision has been made regarding the historic piers, we hope that GSA and FCW will consider the possibility of using the historic piers should they become available. Continued use of the piers would preserve historic resources and potentially be more beneficial from an economic and environmental impact standpoint.

We will provide further comments as soon as we have an opportunity to review the referenced EA. In the meantime, please contact me at andrew.lewis@dc.gov or 202-442-8841 if you should have any questions or comments regarding the historic built environment. Questions or comments relating to archaeology should be directed to Ruth Trocolli at ruth.trocolli@dc.gov or 202-442-8836. Thank you for providing this initial opportunity to review and comment.

Sincerely,

C. Andrew Lewis
Senior Historic Preservation Specialist
DC State Historic Preservation Office

Enclosure 09-196

cc: Gary Porter, GSA
Jim Dolph, Navy

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GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION



August 10, 2009

Ms. Pat Daniels
Senior Project Manager,
GSA
301, 7th Street, SW, Room 2021
Washington DC 20407

RE: Environmental Assessment (EA) for in-water Development at the Yards in South East
Washington DC

Dear Ms. Daniels:

Thank you for sending the letter for inviting the District Department of Transportation (DDOT) comments regarding the scope of the above referenced EA. As you may be aware, DDOT is currently working on a number of projects in that area including two major projects in the Anacostia River, upstream and downstream of your proposed project site. These two projects (1) 11th Street Bridges and (2) South Capitol Street & Bridge project involve the reconstruction of the these bridges over the Anacostia River. The NEPA process for the 11th Street Bridges is complete and a Record of Decision was issued by FHWA last year. DDOT recently selected the Design-Build firm to start the design and construction of this project. The construction of this project will start early 2010. This project will maintain the existing vertical and horizontal clearances underneath the 11th street bridges.

The South Capitol Street & Bridge project is currently in the NEPA process and the FEIS is scheduled to be released late Fall 2009. This project includes the reconstruction of the new South Capitol Street Bridge (also known as Frederick Douglass Memorial Bridge) on a new alignment downstream of the existing bridge. The new bridge will be an opening span bridge and will have a vertical clearance of 35ft. Extensive public involvement was conducted for this project which included river users. Further information regarding these projects can be obtained by visiting: www.theanacostiawaterfront.com and www.southcapitoleis.com .

DDOT strongly recommends GSA and the developer to actively manage the recreational sailing vessels proposed to use the boat slips at "The Yards". The mast height of these vessels should be limited to 3 feet below the vertical clearance of the new Frederick Douglass Memorial Bridge i.e. 32 ft of mast height. Please also note that the bridge opening operations will not be a manned

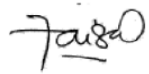
operation, therefore any bridge opening requests have to be made to DDOT atleast 48 hours in advance. Also, the opening operations can only be performed in non-rush hours.

Mr. Jeffrey Seltzer is the Project Manager for the South Capitol Street EIS. He can be contacted at Jeffery.seltzer@dc.gov . Please include Mr. Seltzer and me in any further correspondence with DDOT.

Please invite DDOT to any agency and public meetings that may schedule for this project. Please feel free to contact me if you need any further information.

We look forward to working with you.

Sincerely,



Faisal Hameed,
Program Manager,
Project Development and Environment
202-671-2326

Cc:

Kathleen Penney, Chief Engineer
Karina Ricks, Associate Director
Jamie Henson, Transportation Planner
Jeffrey Seltzer, Program Manager

District of Columbia Office of Planning



Office of the Director

August 12, 2009

U.S. General Services Administration
c/o Ms. Pat Daniels
301 7th Street, SW
Room 2021
Washington, DC 20407-0001

RE: Environmental Assessment for In-water Development at the Yards in the Near Southeast Neighborhood

Dear Ms. Daniels:

Thank you for contacting the Office of Planning (OP) regarding the above referenced undertaking. OP submits the following in response to your request for assistance in identifying important environmental and cultural resources in the project area that should be addressed as part of the Environmental Assessment (EA). We also have provided specific land use and zoning information to be considered as part of the design process. In this context, OP submits additional comments on these issues for your consideration during the design and environmental assessment processes.

Cultural & Historic Resources

The State Historic Preservation Office (SHPO) has responded to this undertaking by providing a separate letter of comments to GSA.

OP has identified the following policies and actions in the Comprehensive Plan to be addressed throughout the EA process:

Action T-2.1.G: Water Taxis

Explore public-private and regional partnership opportunities to provide water taxis on the Potomac and Anacostia Rivers to serve close-in areas around the District, as well as longer-distance routes from points south such as Indian Head on the east side of the Potomac and Woodbridge on the west. In addition to improving mobility and access, water taxis and ferries provide a safe alternative for commuters and an alternate mode of transit in the event Metro service or bridge traffic is disrupted.

407.29

Policy E-1.2.1 River Conservation

Improve environmental conditions along the Anacostia River and other water bodies, including shorelines, wetlands, islands, tributaries and the rivers themselves. Particular attention should be

given to eliminating toxic sediments, improving river edges to restore vegetation and reduce erosion, enhancing wetlands and wildlife habitat, creating new wetlands and reducing litter. 604.3

Policy AW-1.1.6 Pedestrian Orientation of Waterfront Uses

Provide a high level of pedestrian amenities along the shoreline, including informational and interpretive signs, benches, street furniture and public art. 1908.7

Additional zoning and land use issues to be considered during the EA and design development processes:

Mandatory Zoning Commission Review

In 2002-2004, the Office of Planning worked with the GSA to devise a development and zoning program for the Southeast Federal Center (SEFC) site. The resulting Zoning Commission action, in Order 03-06, established zoning for the property, including CR (high density mixed use) along M Street SW; R5E and R5D (medium / high density residential) at the center of the site, and W-0 (low density waterfront related uses) along the Anacostia River. The W-0 zone allows a very limited range of park and waterfront related uses by-right, and a broader range of uses (such as a marina) by special exception. As part of Order 03-06, the Zoning Commission also adopted the SEFC Overlay, which, among its many requirements, requires mandatory design review by the Zoning Commission for all new structures and exterior changes within the SEFC/W-0 area (per § 1805.6).

Forest City Washington has already received approval from the Zoning Commission for the first two phases of The Yards development for the waterfront park features (ZC 08-04) and the retail buildings (ZC 08-04-A). The plans include a wide public walk / bike way along the waterfront, in accordance with the AWI. At their last appearance before the ZC, Forest City Washington indicated they would seek Commission approval for the third phase of this development, which would include the water-oriented recreational features, but did not indicate a timeframe for doing so. One of the significant issues to be addressed as part of this Zoning Commission review will be how the marina impacts the public experience and how full public accessibility and visibility to and along the water's edge (including connections to the planned sea walk to the west and the existing sea walk along the Navy yard facility to the west) is maintained. In particular, security needs of a marina will have to be reconciled with the requirement for full public accessibility.

Proposed Uses

The proposed uses described in the EA scoping letter include, a public pier, marina (including floating homes, and a water taxi stands are permitted via special exception (per § 927), and subject to Zoning Commission review (per § 1805.6) as discussed above.

Design Requirements

No waterfront setback is required for a water taxi or public pier. A boathouse or any structure associated with a marina would be required to be set back from the waterfront, or the applicant could request relief from the requirement as part of the Zoning Commission review.

- Maximum height for all structures in W-0 = 40'; Maximum height of buildings on or over the water = 25' (per § 930)
- Floor Area Ratio (FAR) for marina and recreational uses = 0.75 (for others it's 0.5) (per § 931)
- Lot occupancy for marina and recreational uses = 50% (for others it's 25%) (per § 932)

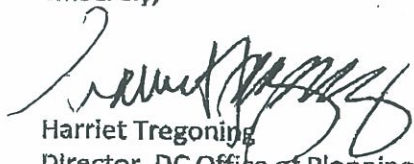
- Rear and side yards are required per §§ 933 and 934

Parking

There may be a need to consider parking requirements, if any, for the marina – where parking spaces would be located, or if relief is needed from neighborhood impacts.

OP appreciates the opportunity to provide comments and identify issues that will be studied in the Environmental Assessment. We welcome the opportunity to work with GSA and Forest City Washington throughout the next stages of this process. If you have questions, please do not hesitate to contact me, or Geraldine Gardner, Associate Director for Neighborhood Planning, at (202) 442-7600.

Sincerely,



Harriet Tregoning
Director, DC Office of Planning

mb/gg/HT

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"Hameed, Faisal (DDOT)"
<faisal.hameed@dc.gov>

08/13/2009 06:35 PM

To <pat.daniels@gsa.gov>

cc "Seltzer, Jeffrey (DDOT)" <jeffrey.seltzer@dc.gov>

bcc

Subject Response to the Scoping letter for ther in-water Development
at the Yards Environmental Assessment

Ms. Daniels:

Attached is the response to your comment letter dated July 14th, 2009 for the above reference project.

A hard copy has also been mailed to your mailing address.

Please feel free to contact me if you need any further information.

Thanks

Faisal

Faisal Hameed | Program Manager, Project Development & Environment | Transportation Policy &
Planning Administration | **d.** District Department of Transportation | 2000 14th Street, NW, 7th
Floor, Washington DC 20009 | desk (202) 671-2326 | fax (202) 671-0617 | www.ddot.dc.gov



Please consider the Environment before printing this email.



The Yards EA Scoping- DDOT Comments.pdf

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Habitat Conservation Division
Chesapeake Bay Program Office
410 Severn Ave., Suite 107A
Annapolis, MD 21403

August 28, 2009

MEMORANDUM TO: Pat Daniels, Senior Project Manager
U.S. General Services Administration

FROM: John Nichols 

SUBJECT: The Yards, Near Southeast D.C.

This concerns your inquiry, dated July 28, 2009, regarding potential impacts to National Marine Fisheries Service (NMFS) trust resources that may result from proposed in-water development at the Yards in the Near Southeast, in the Anacostia River in Washington, D.C. Your inquiry concerns preparation of an Environmental Assessment (EA) for this proposal.

The Anacostia River within the project area is a documented spawning and nursery ground, and migratory corridor for several species of anadromous fish, including alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), hickory shad (*Alosa mediocris*), white perch (*Morone americana*), and yellow perch (*Perca flavescens*). Although poor water quality generally limits spawning activity in the project area, these species move upstream to spawn in the East and West Branches of the Anacostia River, and associated tributaries, where ecological conditions are more favorable for spawning and nursery activities. Adult and juvenile (young-of-the-year) migratory fish move through waters of the project area during the period of February 15 – June 15 of each year.

Based on scoping information about in-water actions (i.e., piers, boat slips) provided in your inquiry, NMFS preliminary concerns pertain to potential disturbances associated with such actions; i.e., particularly dredging to improve access. Should dredging be necessary for this proposal, NMFS will recommend that it be restricted during the migratory fish spawning period (given above).

In consideration of the location of the project site, no Essential Fish Habitat (related to the Magnuson-Stevens Fishery Conservation & Management Act) has been designated for the project area.

NMFS has determined that the endangered shortnose sturgeon is present in the tidal Potomac River, including the lower Anacostia River. You should contact Julie Crocker of our Protected Resources Division in Gloucester, MA; (978) 281-9328, ext. 6530, or, Julie.Crocker@NOAA.GOV, to determine your agency's Section 7 consultation responsibilities for this project under the Endangered Species Act.

Finally, literature listed below will provide your agency with additional fisheries and environmental information for preparation of the EA.

If you have any questions, please contact me at (410) 267-5675; or, John.Nichols@NOAA.GOV.



LITERATURE REVIEW

Lippson, Alice J., M. S. Haire, A. F. Holland, F. Jacobs, J. Jensen, R. L. Moran-Johnson, T.T. Polger, and W. A. Richkus. 1978. Environmental Atlas of the Potomac Estuary, Martin Marietta Corporation, *Prepared for*: MD Department of Natural Resources Power Plant Siting Program.

O'Dell, Jay, J. Gabor, and R. Dintaman. 1975. Survey of anadromous fish spawning areas. Completion Report, Project AFC-8, *for*: Potomac River Drainage. MD Department of Natural Resources, Fisheries Administration, Annapolis.



ACADEMY OF THE HOLY CROSS – AMERICAN UNIVERSITY CREW – ANACOSTIA WATERSHED SOCIETY – BISHOP IRETON
HIGH SCHOOL CREW – CAPITAL ROWING CLUB – D.C. STROKES ROWING CLUB – GONZAGA HIGH SCHOOL CREW –
NATIONAL CAPITAL AREA WOMEN'S PADDLING ASSOCIATION – ORGANIZATION FOR ANACOSTIA ROWING & SCULLING –
WAKEFIELD HIGH SCHOOL CREW

October 20, 2009

Ms. Suzanne Hill
GSA NCR NEPA Lead
301 7th Street, SW, Room 7800
Washington, DC 20307

Dear Ms. Hill:

Enclosed is a map of the Anacostia River, showing the Federal Navigation Channel ("the Channel") and the prescribed traffic patterns for rowers and paddlers on this segment of the river. These traffic patterns, constituting a 'Practice Course', have been established specifically for safety reasons by the Anacostia Community Boathouse Association (ACBA) and its member organizations and have been in effect for more than a decade. This letter, about some of our safety concerns, is for your use in the ongoing Environmental Assessment for In-Water Development at The Yards.

Safety reasons also dictate that we at ACBA establish and maintain viable and mutually beneficial relations with the management and ultimately the users of the marina to be developed at The Yards. The Environmental Assessment (EA) now under way and this letter are just the first steps in that direction.

The enclosure is the map of the Practice Course that Bob Day agreed to submit as a contribution to the EA, as discussed during the Stakeholders Meeting on In-Water Development at The Yards, held on September 9, 2009.

Anacostia Community Boathouse

The Anacostia Community Boathouse and its related facilities are located underneath and between the two spans of the 11th Street Bridge. ACBA's ten member organizations (listed on the above letterhead) organize and sponsor a variety of non-motorized boating activities that foster physical fitness and camaraderie, connect neighborhoods along the Anacostia River to the waterfront, and build a spirit of environmental stewardship of the river through increased recreational usage. Our community-based programs include free learn-to-row and learn-to-paddle clinics; adult competitive and recreational programs; programs for senior citizens; and "breeding" of rowing programs at local high schools otherwise unable to afford them. We also host several regional regattas on the Anacostia River each year, increasing the economic benefits our activities bring to the surrounding neighborhoods. ACBA has no paid staff, and our facilities were developed through the sweat equity, dues, and donations of our membership, with the continued support of the D.C. Government. We have operated for well over a decade at the current site, bringing watersport opportunities to many thousands of children and adults.

Every day from February through November, ACBA sends out hundreds of rowers and paddlers for practice. Much of our training occurs before and after school and work hours (5:15-7:00am and 4:00-8:00pm), which means we often are on the water in the dark. The majority of our boats are low-lying, fragile racing shells, and if one of these boats collides with an object of any substantial size or weight, serious injury and property damage can be caused. We have rigorous safety programs and procedures at the Boathouse. All of our boats are steered by persons familiar with the river and its traffic patterns, are accompanied by coaches in a launch with life jackets and other equipment, and use lights for outings in darkness. Our river traffic pattern has been designed to minimize the chance of collisions.

Practice Course and Safety Requirements

Our primary safety concern is to avoid collisions between power boats and small non-motorized, people-powered boats. We are also concerned about wakes, which can swamp small boats or cause them to capsize. For these and other reasons, we primarily row and paddle on the margins of the Channel during our practice sessions. Our counter clockwise traffic pattern is also designed to avoid collisions between the member organizations' small boats rowing downstream past The Yards and those rowing upstream on the other side of the river.

It will be important for the EA to differentiate between the Practice Course and the Race Course. The Practice Course, which extends all the way downstream to the Potomac River and the Washington Channel, is of greater concern in the vicinity of The Yards; the Race Course is on the Regatta Reach - the straight stretch of the Anacostia between the bend at the USS Barry (DS 933) and the bend further upstream at the CSX Railroad Bridge.

The Practice Course and the Race Course are distinctly different and both absolutely necessary. Rowers and paddlers need more room and greater distances to practice safely and need to avoid the middle arches and spans of bridges—even though those arches may be the ones authorized by the Corps of Engineers for the Channel. In essence, we have up to four lanes of boat traffic in each direction, traveling at speeds from 0 to 10 knots, and the middle arches form the medians that keep that boat traffic safely divided. Races, on the other hand, do use the center arches of the 11th Street Bridges, but they have up to five or six racing lanes in one direction and only one, low-speed return lane. Developers do not always understand the distinction between the Practice and Race Courses, so the EA for In-Water Development at The Yards needs to make this differentiation clear.

All parties need to be aware of the potential hazards posed by yachts and other powerboats entering the Channel from their slips or crossing from the Channel into their slips. Races require a Special Events Permit from the D.C. Harbor Police. This permitting process results in a Notice to Shippers and all river users of the upcoming racing events.

Postulated Water Taxi Service

We note from the "Project Overview" distributed at the Stakeholders Meeting that "One pier of the public marina may also serve to accommodate a future water taxi service to other river ports." According to press accounts one such water ferry proposal being presented to Northern Virginia Regional Commission and the Metropolitan Washington Council of Governments assumes in its project planning "that no-wake restrictions will be lifted" along the Anacostia River.

The Anacostia Community Boathouse, on behalf of all rowers and paddlers, is opposed for safety reasons to the lifting of No-Wake restrictions along the Anacostia. We are reasonably certain that most yacht owners mooring their boats at all yacht clubs from James Creek to Seafarers Yacht Club, including those with slips at The Yards, would also be opposed to lifting the No-Wake restrictions along the Anacostia.

If you have any questions, please feel free to contact me (JNey@cityyear.org) or Bob Day (dayhaven@comcast.net).

Sincerely,

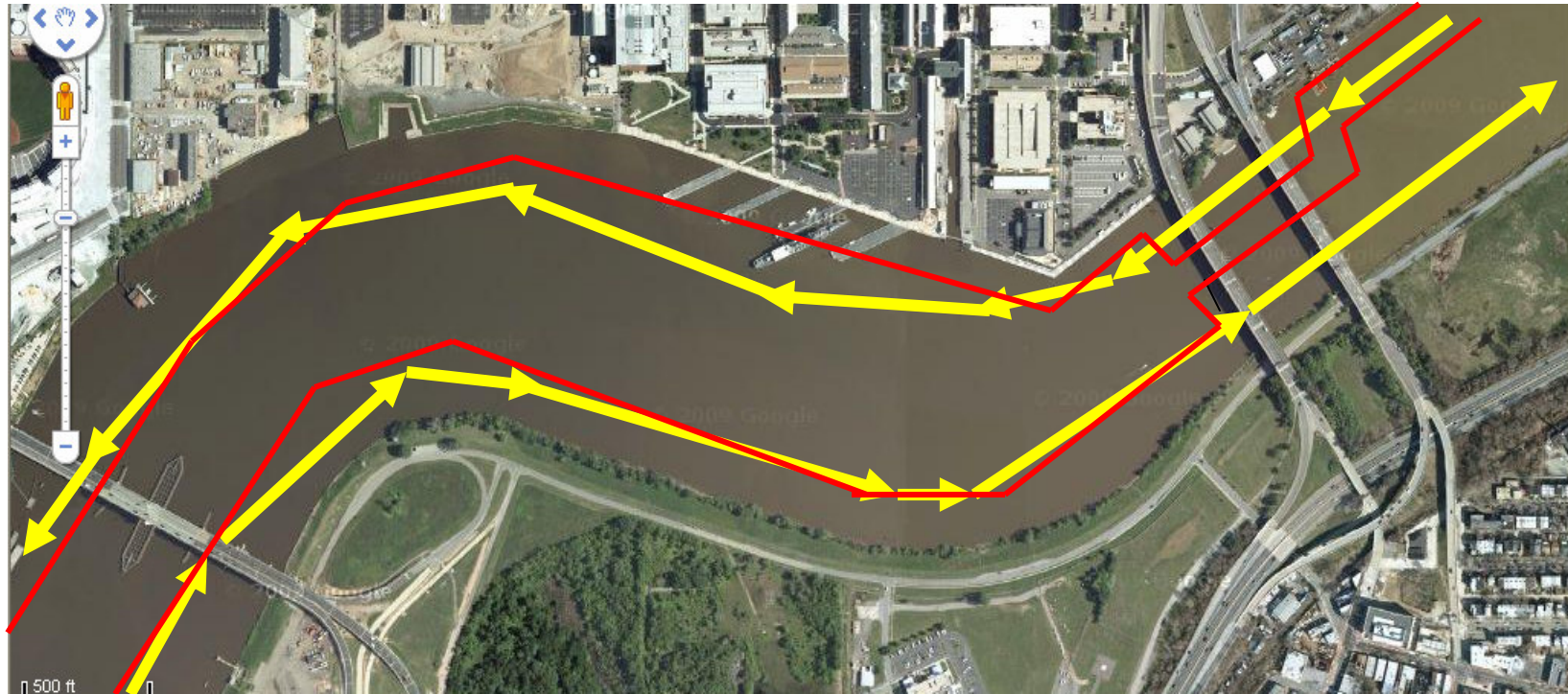




Jennifer Ney, ACBA President

Enclosure:

Satellite View of Anacostia Channel and the ACBA Practice Course
Map of Anacostia Community Boathouse Practice Traffic Pattern

Anacostia Community Boathouse Association



-  Federal Navigational Channel
-  Anacostia Community Boathouse Practice Course